

**391-3-1-.02 PROVISIONS. AMENDED.**

- (1) GENERAL REQUIREMENT: No person shall construct or operate any facility from which air contaminants are or may be emitted in such a manner as to fail to comply with:
- (a) Any applicable standard of performance or other requirements established by EPA pursuant to Section 111 of the Federal Act; and
  - (b) Any applicable emission standard or other requirement for a hazardous air pollutant established by EPA pursuant to Section 112 of the Federal Act.
  - (c) Any applicable increment, precondition for permit, or other requirement established for the Prevention of Significant Deterioration pursuant to Part C, Title I of the Federal Act; and
  - (d) Any applicable standard, precondition for permit, or other requirement established for sources in areas designed by the Director as being nonattainment with National Ambient Air Quality Standards pursuant to, or as part of Georgia's State Implementation Plan to meet the requirements of, Part D, Title I of the Federal Act.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	DEC 16, 1975	AUG 20, 1976	41 FR 35184
2nd Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047

(2) EMISSION STANDARDS:

(a) General Provisions:

1. No person owning, leasing or controlling the operation of any air contaminant sources shall willfully, negligently or through failure to provide necessary equipment or facilities or to take necessary precautions, cause, permit, or allow the emission from said air contamination source or sources of such quantities of air contaminants as will cause, or tend to cause, by themselves or in conjunction with other air contaminants a condition of air pollution on quantities or characteristics or of a duration which is injurious or which unreasonably interferes with the enjoyment of life or use of property in such area of the State as is affected thereby. Complying with any of the other sections of these rules and regulations of any subdivisions thereof, shall in no way exempt a person from this provision.
2. In cases where more than one section of these regulations applies, the section allowing the least emission of air contaminants to the atmosphere shall prevail.
3. Notwithstanding any other emission limitation or other requirement provided in the regulations, more stringent emission limitations or other requirements may be required of a facility as deemed necessary by the Director to
  - (i) meet any existing Federal laws or regulations, or
  - (ii) safeguard the public health, safety and welfare of the people of the State of Georgia.
4. Notwithstanding any other requirement of this Chapter, in no event shall that part of a stack, which came into existence after December 31, 1970, which exceeds good engineering practice stack height, or any other dispersion technique, be taken into account for the purpose of determining the degree of emission limitations required for control of any pollutant for which there is an ambient air standard established under the Act of the Federal Act. The terms and definitions of "dispersion techniques", "good engineering practice (GEP)", "nearby", and "excessive concentration" are those definitions found in 40 CFR 51.100(hh), (ii), (jj), and (kk) respectively.
5. If the Director finds, after notice and opportunity for public hearing, that a particular instance of violation or noncompliance by a source, owner, or operator, with any emission limitation or standard or other requirement under the Act, is de minimis (as defined pursuant to 42 U.S.C. Section 7420 as amended) in nature, and duration, he may, as allowed by the Act and the Federal Act, exempt such source, owner or operator from the noncompliance penalties provided in Section 22 of the Act.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF JANUARY 26, 1993

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1st Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
2nd Revision:	DEC 15, 1986	JAN 26, 1993	58 FR 6093
	JAN 03, 1991	JAN 26, 1993	58 FR 6093

6. VOC Emission Standards, Exemptions, Area Designations and Compliance Schedules:

- (i) For all sources of VOC emissions otherwise subject to any limitation or requirement of subsection (t) through (ff) [inclusive]; and (hh) through (nn) [inclusive of this section 391-3-1-.02(2), the following sources shall not be subject to any requirement of such subsection:
  - (I) Sources whose potential emissions of volatile organic compounds are not more than 100 tons per year; and
  - (II) Sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance, provided:
    - I. The operation of the source is not an integral part of the production process; and provided,
    - II. The emissions from the source do not exceed 800 pounds in any calendar month; and provided,
    - III. The exemption from such source is approved in writing by the Director.
- (ii) All sources of VOC emissions subject to any limitation or requirement of, or under, subsection (t) through (hh) [inclusive] of section 391-3-1-.02(2), shall comply with the following compliance schedules:
  - (I) For Process and Emission Control Equipment Installation and Modification:
    - I. Except as provided under Part III of this subparagraph (ii) the owner or operator of a VOC emission source subject to any requirement of or under subsections (t) through (hh) [inclusive], of section 391-3-1-.02(2) proposing to install VOC emission control equipment and/or modify process equipment in order to comply with such requirements, shall comply with the increments of progress contained in the following schedule:
      - A. A final control plan and application for a permit to construct for the installation of emission control systems and/or the modification of process equipment must be submitted to the Division no later than September 1, 1979 or 180 days after the EPA has promulgated the revised ozone standard, whichever is later.
      - B. Binding contracts or purchase orders must be entered into before July 1, 1980, or 480 days after the EPA has promulgated the revised ozone standard, whichever is later, for the installation of emission control systems and/or the modification of process equipment.
      - C. On-site construction of emission control systems and/or modifications of process equipment must begin before December 1, 1980, or 630 days after the EPA has promulgated the revised ozone standard, whichever is later.
      - D. On-site construction of emission control systems and/or modification of process equipment must be completed before September 1, 1981, or 900 days after the EPA has promulgated the revised ozone standard, whichever is later .
      - E. Full compliance with the applicable requirements of these Rules (Chapter 391-3-1) must be demonstrated through approved methods and procedures before November 1, 1981, or 960 days after the EPA has promulgated the revised ozone standard, whichever is later.

- F. Any owner or operator of a source subject to this compliance schedule shall certify in writing to the Director, within five days after the date specified in each increment of progress, whether the required increment of progress has been met.

(II) For Low Solvent Content Coating:

- I. Except as provided under Part (III) of this subparagraph (ii) the owner or operator of a VOC emission source subject to any requirement of or under subsections (t) through (hh) [inclusive] of section 391-3-1-.02(2) proposing to employ low solvent content coating technology to comply with such requirements shall comply with the increments of progress contained in the following schedule:
  - A. A final control plan for the application of low solvent content coating technology must be submitted to the Division before September 1, 1979 or 180 days after the EPA has promulgated a revised ozone standard, whichever is later.
  - B. Evaluation of product quality and commercial acceptance must be completed before October 1, 1980 or 590 days after the EPA has promulgated a revised ozone standard, whichever is later.
  - C. Purchase orders must be issued for low solvent content coatings and process modifications before January 1, 1981 or 660 days after the EPA has promulgated a revised ozone standard, whichever is later.
  - D. Initiation of process modifications must begin before April 1, 1981 or 750 days after the EPA has promulgated a revised ozone standard, whichever is later.
  - E. Process modifications must be completed and use of low solvent content coatings must begin before September 1, 1981 or 900 days after the EPA has promulgated a revised ozone standard, whichever is later.
  - F. Full compliance with the applicable requirements of these rules (391-3-1) must be demonstrated through approved methods and procedures before November 1, 1981 or 960 days after the EPA has promulgated a revised ozone standard, whichever is later.
  - G. Any owner or operator of a source subject to this compliance schedule shall certify in writing to the Director within 5 days after the date specified for each increment of progress, whether the required increment of progress has been met.

(III) Alternate Compliance Schedule:

- I. Nothing in this subparagraph (ii) shall prevent the Director from promulgating a separate schedule for any source if he finds that the imposition of a compliance schedule under Parts (I) or (II) of this Section would be technologically or economically infeasible or impractical.
- II. Nothing in this subparagraph (ii) shall prevent the owner or operator of a VOC source from submitting to the Director for a proposed alternative compliance schedule provided:
  - A. The proposed alternative compliance schedule and final control plan is submitted before September 1, 1979, or 180 days after the EPA has promulgated a revised ozone standard, whichever is later.

- B. The alternative compliance schedule contains increments of progress adequate to determine progress toward full compliance.
  - C. Sufficient documentation and certification from appropriate suppliers, contractors, manufacturers, or fabricators is submitted by the owner or operator of the VOC source to justify to the Director the dates proposed in the increments of progress in such schedule.
- III. Any alternative compliance schedule proposed or promulgated under this Part (III) shall require compliance by the VOC source with the applicable requirements of these Rules (Chapter 391-3-1) as expeditiously as practicable, as judged by the Director, and in no case later than three years after enactment of this rule and its approval by the Administrator.
- IV. Any compliance schedule approved under this Part (III) may be revoked at any time if the source fails to meet any of the increments of progress by the dates specified.
- (iii) All sources of VOC emissions subject to any limitation or requirement of, or under, subsection (hh) through (nn) [inclusive] of section 391-3-1-.02(2), shall comply with the following compliance schedules:
- (I) For Process and Emission Control Equipment Installation and Modification:
    - I. Except as provided under Part III of this subparagraph (iii) the owner or operator of a VOC emission source subject to any requirement of or under subsections (hh) through (nn) [inclusive], of section 391-3-1-.02(2) proposing to install VOC emission control equipment and/or modify process equipment in order to comply with such requirements, shall comply with the increments of progress contained in the following schedule:
      - A. A final control plan and application for a permit to construct for the installation of emission control systems and/or the modification of process equipment must be submitted to the to the Division no later than September 1, 1981.
      - B. Binding contracts or purchase orders must be entered into before July 1, 1982, for the installation of emission control systems and/or the modification of process equipment.
      - C. On-site construction of emission control systems and/or modifications of process equipment must begin before December 1, 1983.
      - D. On-site construction of emission control systems and/or modification of process equipment must be completed before September 1, 1983.
      - E. Full compliance with the applicable requirements of these Rules (Chapter 391-3-1) must be demonstrated through approved methods and procedures before December 1, 1983.
      - F. Any owner or operator of a source subject to this compliance schedule shall certify in writing to the Director, within five days after the date specified in each increment of progress, whether the required increment of progress has been met.
  - (II) For Low Solvent Content Coating:
    - I. Except as provided under Part (III) of this subparagraph (iii) the owner or operator of a VOC emission source subject to any requirement of or under subsections (hh) through

(nn) [inclusive] of section 391-3-1-.02(2) proposing to employ low solvent content coating technology to comply with such requirements shall comply with the increments of progress contained in the following schedule:

- A. A final control plan for the application of low solvent content coating technology must be submitted to the Division before September 1, 1981.
- B. Evaluation of product quality and commercial acceptance must be completed before October 1, 1982.
- C. Purchase orders must be issued for low solvent content coatings and process modifications before January 1, 1982.
- D. Initiation of process modifications must begin before January 1, 1983.
- E. Process modifications must be completed and use of low solvent coatings must begin before September 1, 1983.
- F. Full compliance with the applicable requirements of these rules (Chapter 391-3-1) must be demonstrated through approved methods and procedures before December 1, 1983.
- G. Any owner or operator of a source subject to this compliance schedule shall certify in writing to the Director within five days after the date specified for each increment of progress, whether the required increment of progress has been met.

(III) Alternate Compliance Schedule:

- I. Nothing in this subparagraph (iii) shall prevent the Director from promulgating a separate schedule for any source if he finds that the imposition of a compliance schedule under Parts (I) or (II) of this Section would be technologically or economically infeasible or impractical.
- II. Nothing in this subparagraph (iii) shall prevent the owner or operator of a VOC source from submitting to the Director for a proposed alternative compliance schedule provided:
  - A. The proposed alternative compliance schedule and final control plan is submitted before September 1, 1981.
  - B. The alternative compliance schedule contains increments of progress adequate to determine progress toward full compliance.
  - C. Sufficient documentation and certification from appropriate suppliers, contractors, manufacturers, or fabricators is submitted by the owner or operator of the VOC source to justify to the Director the dates proposed in the increments of progress in such schedule.
- III. Any alternative compliance schedule proposed or promulgated under this Part (III) shall require compliance by the VOC source with the applicable requirements of these Rules (Chapter 391-3-1) as expeditiously as practicable, as judged by the Director.
- IV. Any compliance schedule approved under this Part (III) may be revoked at any time if the source fails to meet any of the increments of progress by the dates specified.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF NOVEMBER 24, 1981

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
2nd Revision:	DEC 18, 1980	NOV 24, 1981	46 FR 57486

7. Excess emissions:

- (i) Excess emissions resulting from startup, shutdown, malfunction of any source which occur through ordinary diligence is employed shall be allowed provided that (I) the best operational practices to minimize emissions are adhered to, and (II) all associated air pollution control equipment is operated in a manner consistent with good air pollution control practice for minimizing emissions, and (III) the duration of excess emissions is minimized.
- (ii) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction are prohibited and are violations of this Chapter (391-3-1).
- (iii) The provisions of this paragraph 7. shall apply only to those sources which are not subject to any requirement under section (8) of this Rule, (i.e. Rule 391-3-1-.02) or any requirement of 40 CFR, Part 60, as amended, concerning New Source Performance Standards.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
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2nd Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047



8. Emission Standards: With respect to the emission standards and limitations contained in this Chapter (391-3-1), as such requirements are applied to more than one process or piece of equipment at a single source, the Director is hereby authorized to allow to the extent consistent with the Act and the Federal Act, under such conditions as he shall deem appropriate, Equivalent Alternative Emission Reduction Options provided that:
- (i) The source or facility proposing to use an equivalent alternative emission reduction option is and continues to be in compliance, pending consideration of any such proposal (and any associated review), with either:
    - I. The applicable emission requirements under this Chapter (391-3-1); or
    - II. Any final order or agreement of the Director (or any court decree) with respect to such source then currently in effect and containing a timetable and schedule of compliance requiring expeditious compliance with the applicable emission requirements under this Chapter (391-3-1) and providing for resolution of penalties, issues and other sanctions; and
  - (ii) Such option will not interfere with the attainment and maintenance of ambient air quality standards as expeditiously as practicable and does not result in any delay in compliance by any source; and
  - (iii) Such option is equivalent in pollution reduction, enforceability, and environmental impact to existing individual process or equipment standards; and
  - (iv) The source or facility proposing to use an option agrees, pending consideration of any such proposal (and any associated review), not to seek a stay of enforcement of or relief from such requirement, order, agreement, or degree (see (i) above) in any administrative or judicial proceeding in State or Federal Courts and tribunals; and
  - (v) The source or facility proposing to use an option shall have the burden of demonstrating to the satisfaction of the Director, compliance with the requirements of subparagraphs (ii) and (iii) hereof; and
  - (vi) Provided further that any such option must receive the approval of EPA prior to becoming effective.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 17, 1979	SEP 18, 1979	44 FR 54047

9. Kraft Pulp Mill TRS Compliance Schedules:

- (i) Except as provided in subparagraph (ii) of this paragraph 9., all sources of TRS emissions from kraft pulp mills subject to any limitation or requirement of, or under, subsection (gg) of this section 391-3-1-.02(2), shall comply with the following compliance schedule:
  - (I) A final control plan and application for a permit to construct for the installation of emission control systems and/or the modification of process equipment and/or process modifications must be submitted to the Division by no later than 18 months following the notification date:
  - (II) Binding contracts or purchase orders must be entered into no later than 27 months following the notification date.
  - (III) On-site construction of emission control systems and/or modification of the process and/or process equipment must begin no later than 27 months following the notification date.
  - (IV) On-site construction of emission control systems and/or modification of the process and/or process equipment must be completed no later than 46 months following the notification date.
  - (V) Full compliance with the applicable requirements of these Rules (Chapter 391-3-1) must be demonstrated by approved methods and procedures no later than forty (40) months following the notification date.
  - (VI) Any owner or operator of a source subject to this compliance schedule shall certify in writing to the Director, within five days after the date specified in each increment of progress, whether the required increment of progress has been met.
  - (VII) All owners and operators are encouraged to implement this schedule at an expedited rate.
- (ii) Alternate Compliance Schedule:
  - (I) Nothing in this paragraph (9) shall prevent the Director from promulgating a separate schedule for any source if he finds on his own or upon owner or operator's proposal that the imposition of a compliance schedule under subparagraph (I) of this Section would be technologically or economically infeasible or impractical.
  - (II) Nothing in this paragraph (9) shall prevent the owner or operator of a TRS source from submitting to the Director a proposed alternative compliance schedule provided:
    - I. The proposed alternative compliance schedule and final control plan is submitted no later than 12 months following the notification date.
    - II. The alternative compliance schedule contains increments of progress adequate to determine progress toward full compliance.
    - III. Sufficient documentation is submitted by the owner or operator of the TRS source to justify to the Director the dates proposed in the increments of progress in such schedule.
    - IV. If the alternative compliance schedule is based on alternate control technology, evidence is furnished to indicate that the use of the proposed alternate control technology will provide a greater continuous emission reduction than will be achieved through the use of a conventional control technology, or that an equivalent continuous emission reduction will be achieved at a lower cost in terms of energy, economic, or other non-air quality environmental impact; that the application of the proposed alternate control technology will have a reasonable chance of being successfully

demonstrated; that the portion of the kraft pulp mill to be involved in the alternate compliance technology demonstration be identified by the applicant; and that a final time to achieve compliance with the regulation be incorporated into the schedule, by other means, if the alternate control technology is not successfully demonstrated.

- (III) A separate or alternative compliance schedule proposed or promulgated under subparagraph (ii) of this section shall require compliance by the TRS source with the applicable requirements or these Rules (Chapter 391-3-1) as expeditiously as practicable, as judged by the Director.
- (IV) Any compliance schedule approved under subparagraph (ii) of this section may be revoked at any time if the source fails to meet any of the increments of progress by the dates specified.
- (V) Any compliance schedule approved under subparagraph (ii) of this Section shall be made a part of the state implementation (SIP) and be subject to a public hearing after public notice (30 days). The schedule shall not become final until submitted to and approved by the US EPA as required in 40 CFR 60.23, 60.24, 60.27 and 60.28.
- (iii) For the purpose of this paragraph, the "notification date" means September 1, 1988, or the date on which the US EPA grants final approval of the TRS compliance schedules of this paragraph 9., whichever is later.
- (iv) For the purpose of this paragraph, conventional control technology shall mean that mix of emission control equipment and/or process modifications defined as Retrofit Model Number 5, Kraft Pulping, Control of TRS Emissions from Existing Mills, EPA- 450/2-78-003b, March, 1979.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 30, 1988

	Date Submitted to EPA	Date Approved by EPA	Federal Register
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1st Revision:	JUN 03, 1988	SEP 30, 1988	53 FR 38290

(b) Visible Emissions:

1. Except as may be provided in other more restrictive or specific rules or subdivisions of this Chapter, no person shall cause, let, suffer, permit, or allow emissions from any air contaminant source the opacity of which is equal to or greater than forty (40) percent.
2. Upon written application to the Director, a person owning or operating an air pollution source may request that visible emission evaluations (opacity measurements) be conducted during particulate emissions tests for a source, for the purpose of demonstrating compliance with a particulate emission standard. Any such tests or evaluations shall be conducted according to methods, procedures and requirements approved by the Division. All test results shall be subject to verification by the Division. The correlated visible emissions opacity determined during any such particulate emission tests which demonstrate compliance (with results verified by the Division) may, if greater than any applicable visible emissions opacity standard of this Chapter 391-3-1, be established by the Director as the visible emissions standard (opacity standard) for the source. Such visible emissions standards if so established shall be incorporated as a condition of the operating permit for the air pollution source.
3. The visible emission limitation of this subsection applies to direct sources of emissions such as stationary structures, equipment, machinery, stacks, flues, pipes, exhausts, vents, tubes, chimneys or similar structures.
4. The provisions of this subsection (b), apply only to facilities or sources subject to some other emission limitation under this section 391-3-1-.02(2).

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
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1st Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047

(c) Incinerators:

1. Except as specified in the section dealing with conical burners, no person shall cause, let, suffer, permit, or allow the emissions of fly ash and/or other particulate matter from any incinerator, in amounts equal to or exceeding the following:
  - (i) Units with charging rates of 500 pounds per hour or less of combustible waste, including water, shall not emit fly ash and/or particulate matter in quantities exceeding 1.0 pound per hour.
  - (ii) Units with charging rates in excess of 500 pounds per hour of combustible waste, including water, shall not emit fly ash and/or particulate matter in excess of 0.20 pounds per 100 pounds of charge.
2. No person shall cause, let, suffer, permit, or allow from any incinerator, visible emissions the opacity of which is equal to or greater than twenty (20) percent except for one (1) six minute period per hour of not more than twenty-seven (27) percent opacity.
3. No person shall cause or allow particles to be emitted from an incinerator which are individually large enough to be visible to the unaided eye.
4. No person shall operate an existing incinerator unless:
  - (i) it is a multiple chamber incinerator;
  - (ii) it is equipped with an auxiliary burner in the primary chamber for the purpose of creating a pre-ignition temperature of 800 degrees F;
  - (iii) it has a secondary burner to control smoke and/or odors and maintain a temperature of at least 1500 degrees F in the secondary chamber.
5. Designs other than those mentioned in subparagraph 4. above shall be considered on an individual basis and will be exempt from the provisions if, in the judgment of the Director, said design results in performance which meets the standard set forth in paragraphs (2)(c)1., 2. and 3. above.
6. The provisions of this subsection (c) shall not apply to:
  - (i) any hazardous waste incinerator subject to Section 391-3-11 of the Georgia Rules for Hazardous Waste Management, 40 CFR 264, Subpart O, as adopted by reference, "Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities," as amended;
  - (ii) any incinerator subject to Section 391-3-1-.02(8)(b)71. of the Georgia Rules for Air Quality Control, "Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced after September 20, 1994," as amended;
  - (iii) any incinerator subject to the Georgia State Plan, under section 111(d) of the federal Act, for "Municipal Waste Combustors for which construction is commenced on or before September 20, 1994," as amended;
  - (iv) any incinerator subject to Section 391-3-1-.02(8)(b)73. of the Georgia Rules for Air Quality Control "Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for which construction is commenced after June 20, 1996," as amended;
  - (v) any incinerator subject to Section 391-3-1-.02(2)(iii) of the Georgia Rules for Air Quality Control "Hospital / Medical / Infectious Waste Incinerators for which construction is commenced on or before June 20, 1996," as amended.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF DECEMBER 2, 1999.

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2nd Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
3rd Revision:	MAY 22, 1985	JUL 6, 1988	53 FR 25329
4th Revision	JUL 10, 1999	DEC 2, 1999	64 FR 67491

(d) Fuel-burning Equipment:

1. No person shall cause, let, suffer, permit, or allow the emission of fly ash and/or other particulate matter from any fuel-burning in operation or under construction on or before January 1, 1972; in amounts equal to or exceeding the following:

- (i) for equipment less than 10 million BTU heat input per hour:

$$P = 0.7 \text{ pounds per million BTU heat input;}$$

- (ii) for equipment equal to or greater than 10 million BTU heat input per hour, or equal to or less than 2,000 million BTU heat input per hour:

$$P = 0.7 (10/R)^{0.202} \text{ pounds per million BTU heat input;}$$

- (iii) equipment larger than 2,000 million BTU heat input per hour;

$$P = 0.24 \text{ pounds per million BTU heat input.}$$

2. No person shall cause, let, suffer, permit, or allow the emission of fly ash and/or other particulate matter from any fuel-burning equipment constructed after January 1, 1972, in amounts equal to or exceeding the following:

- (i) for equipment less than 10 million BTU heat input per hour:

$$P = 0.5 \text{ pounds per million BTU heat input;}$$

- (ii) for equipment equal to or greater than 10 million BTU heat input per hour, or equal to or less than 250 million BTU heat input per hour:

$$P = 0.5 (10/R)^{0.5} \text{ pounds per million BTU heat input;}$$

- (iii) for equipment greater than 250 million BTU heat input per hour:

$$P = 0.10 \text{ pounds per million BTU heat input}$$

$$P = \text{allowable weight of emissions of fly ash and/or other particulate matter in pounds per million BTU heat input}$$

$$R = \text{heat input of fuel-burning equipment in million BTU per hour.}$$

\* Figure 1 on page 212 represents the requirements of paragraph (d) above. [NOTE: THIS FIGURE APPEARS ON PAGE [391-3-1] - 21A]

3. No person shall cause, let, suffer, permit, or allow the emission from any fuel-burning equipment constructed or extensively modified after January 1, 1972, visible emissions the opacity of which is equal to or greater than twenty (20) percent except for one six minute period per hour of not more than twenty-seven (27) percent opacity.

4. No person shall cause, let, permit, suffer, or allow the emission of nitrogen oxides ( $\text{NO}_x$ ), reported as nitrogen dioxide, from any fuel-burning equipment equal to or greater than 250 million BTU per hour of heat input that is constructed or extensively modified after January 1, 1972, equal to or exceeding the following:

- (i) when firing coal--0.7 pounds of  $\text{NO}_x$ , per million BTU's of heat input;

- (ii) when firing oil--0.3 pounds of NO<sub>x</sub> per million BTU's of heat input;
- (iii) when firing gas--0.2 pounds of NO<sub>x</sub> per million BTU's of heat input;
- (iv) when different fuels are burned simultaneously in any combination the applicable standard, expressed as pounds of NO<sub>x</sub> per million BTU's of heat input, shall be determined by proration. Compliance shall be determined by using the following formula:

$$\frac{x(0.20) + y(0.30) + z(0.70)}{x + y + z}$$

where:

x = percent of total heat input derived from gaseous fuel;

y = percent of heat input derived from oil;

z = percent of total heat input derived from coal.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

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(e) Particulate Emission from Manufacturing Processes:

1. Except as may be specified in other sections of these regulations or as may be specified in a permit issued by the Director, no person shall cause, let, permit, suffer, or allow the rate of emission from any source, particulate matter in total quantities equal to or exceeding the amounts shown in Table Ia or Ib. Equipment in operation, or under construction contract, on or before July 2, 1968, shall be considered existing equipment. All other equipment put in operation or extensively altered after said date is to be considered new equipment.

- (i) The following equations shall be used to calculate the allowable rates of emission from new equipment and shall accompany Table Ia:

$$E = 4.1 P^{0.67}; \text{ for process input weight rate up to and including 30 tons per hour.}$$

$$E = 55 P^{0.11} - 40; \text{ for process input weight rate above 30 tons per hour.}$$

- (ii) The following equation shall be used to calculate the allowable rates of emission from existing and shall accompany Table Ib:

$$E = 4.1 P^{0.67}$$

E = emission rate in pounds per hour

P = process weight rate in tons per hour.

**Table Ia**

<b>ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE ON NEW EQUIPMENT</b>					
Process Input Weight Rate		Rate of Emission	Process Input Weight Rate		Rate of Emission
lb/hr	or tons/hr	lb/hr	lb/hr	or tons/hr	lb/hr
100	0.05	0.551	16,000	8	16.5
200	0.10	0.877	18,000	9	17.9
400	0.20	1.40	20,000	10	19.2
600	0.30	1.83	30,000	15	26.2
800	0.40	2.22	40,000	20	30.5
1,000	0.50	2.58	50,000	25	35.4
1,500	0.75	3.38	60,000	30	40.0
2,000	1.00	4.10	70,000	35	41.3
2,500	1.25	4.76	80,000	40	42.5
3,000	1.50	5.38	90,000	45	43.6
3,500	1.75	5.96	100,000	50	44.6
4,000	2.00	6.52	120,000	60	46.3
5,000	2.50	7.58	140,000	70	47.8
6,000	3.00	8.56	160,000	80	49.0
7,000	3.50	9.49	200,000	100	51.2
8,000	4.00	10.4	1,000,000	500	69.0
9,000	4.50	11.2	2,000,000	1,000	77.6
10,000	5.00	12.0	6,000,000	3,000	92.7
12,000	6.00	13.6			

**Table Ib**

<b>ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE ON EXISTING EQUIPMENT</b>					
Process Input Weight Rate		Rate of Emission	Process Input Weight Rate		Rate of Emission
lb/hr	or tons/hr	lb/hr	lb/hr	or tons/hr	lb/hr
100	0.05	0.551	16,000	8	16.5
200	0.10	0.877	18,000	9	17.9
400	0.20	1.40	20,000	10	19.2
600	0.30	1.83	30,000	15	25.2
800	0.40	2.22	40,000	20	30.5
1,000	0.50	2.58	50,000	25	35.4
1,500	0.75	3.38	60,000	30	40.0
2,000	1.00	4.10	70,000	35	44.35
2,500	1.25	4.76	80,000	40	48.4
3,000	1.50	5.38	90,000	45	52.5
3,500	1.75	5.96	100,000	50	56.4
4,000	2.00	6.52	120,000	60	63.5
5,000	2.50	7.58	140,000	70	70.6
6,000	3.00	8.56	160,000	80	77.0
7,000	3.50	9.49	200,000	100	89.7
8,000	4.00	10.4	1,000,000	500	262
9,000	4.50	11.2	2,000,000	1,000	414
10,000	5.00	12.0	6,000,000	3,000	873
12,000	6.00	13.6			

To use Tables Ia and Ib, take the process input weight rate (Lb/Hr or Tons/Hr). Then find this figure on the table, opposite is the maximum number of pounds of contaminants which may be discharged into the atmosphere in any one hour.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047

(f) Normal Superphosphate Manufacturing Facilities:

1. Unit emissions of fluoride for normal superphosphate manufacturing facilities, expressed as pounds of fluoride ion per ton of  $P_2O_5$  or equivalent, shall not exceed 0.40 pounds. The allowable emission of fluorides shall be calculated by multiplying the unit emission specified above times the expressed design capacity of the source in question.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047

(g) Sulfur Dioxide:

1. New fuel-burning sources capable of firing fossil fuel(s) at a rate exceeding 250 million BTU's per hour heat input, constructed or extensively modified after January 1, 1972, may not emit sulfur dioxide equal to or exceeding:
  - (i) 0.8 pounds of sulfur dioxide per million BTU's of heat input derived from liquid fossil fuel or derived from liquid fossil fuel and wood residue,
  - (ii) 1.2 pounds of sulfur dioxide per million BTU's of heat input derived from solid fossil fuel or derived from solid fossil fuel and wood residue,
  - (iii) When different fossil fuels are burned simultaneously in any combination, the applicable standard expressed as pounds of sulfur dioxide per million BTU's of heat input shall be determined by proration using the following formula:

$$a = \frac{y (0.80) + z (1.2)}{y + z}$$

where:

y = percent of total heat input derived from liquid fossil fuel,

z = percent of total heat input derived from solid fossil fuel,

a = the allowable emission in pounds per million BTU's

2. In addition to the stipulations and limitations in paragraphs 1. and 2. of this subsection, all fuel burning sources below 100 million BTU's of heat input per hour shall not burn fuel containing more than 2.5 percent sulfur, by weight. All fuel burning sources having a heat input of 100 million BTU's per hour or greater shall not burn a fuel containing more than 3 percent sulfur, by weight.
3. Notwithstanding the limitations on sulfur content of fuels stated in paragraph 3, above, the Director may allow sulfur content greater than that allowed in paragraph 3. above, provided that the source utilizes sulfur dioxide removal and the sulfur dioxide emission does not exceed that allowed by paragraph 3. above, utilizing no sulfur dioxide removal.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF JANUARY 26, 1993

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	DEC 16, 1975	AUG 20, 1976	41 FR 35184
2nd Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
3rd Revision:	DEC 15, 1986	JAN 26, 1993	58 FR 6093
	JAN 03, 1991	JAN 26, 1993	58 FR 6093

(h) Portland Cement Plants:

1. See Section 391-3-1.02(8) for applicable New Source Performance Standards.

(i) Nitric Acid Plants:

1. No person shall cause or allow the emission of nitric oxides (NO<sub>x</sub>), expressed as nitrogen dioxide, from Nitric Acid Plants equal to or exceeding:
  - (i) for plants constructed before January 1, 1972: 25 pounds of NO<sub>x</sub> expressed as nitrogen dioxide, per ton of 100% acid produced;
  - (ii) for plants constructed after January 1, 1972, the applicable New Source Performance Standards of 391-3-1-.02 (8).
2. No person shall operate a nitric acid plant unless the plant is equipped with a continuous NO<sub>x</sub> monitor and recorder or an alternate system approved by the Director.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	DEC 16, 1975	AUG 20, 1976	41 FR 35184
2nd Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047

(j) Sulfuric Acid Plants:

1. No person shall cause or allow the emission of sulfur dioxide (SO<sub>2</sub>) and acid mist from sulfuric acid plants equal to or exceeding:
  - (i) For plants constructed before January 1, 1972, 27.0 pounds of SO<sub>2</sub>, and 0.15 pounds of acid mist per ton of 100% acid produced:
  - (ii) For plants constructed or extensively modified after January 1, 1972, the applicable New Source Performance Standards of 39 1-3-1-.02(8).
2. No person shall operate a sulfuric acid plant unless the plant is equipped with a continuous SO<sub>2</sub> monitor and recorder or an approved alternate system approved by the Director.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	JAN 31, 1978	MAY 27, 1982	47 FR 23162
2nd Revision:	DEC 16, 1975	AUG 20, 1976	41 FR 35184
3rd Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047

(k) Particulate Emission from Asphaltic Concrete Hot Mix Plants:

1. No person shall cause, let, suffer, permit, or allow the emission of particulate matter from an Asphaltic Concrete Hot Mix Plant equal to or exceeding derived from the following formulas:
  - (i) For existing plants below 45 tons per hour input-- $E = P$ , pounds per hour;
  - (ii) For existing plants equal to or greater than 45 tons per hour input-- $E = 10P^{0.4}$  pounds per hour;
  - (iii) For new plants below 125 tons per hour input-- $E = 2.1 P^{0.6}$ , pounds per hour;
  - (iv) For new plants equal to or greater than 125 tons per hour input-- $E = 14 P^{0.2}$ , pounds per hour;
  - (v) E equals the allowable emission of particulate matter in pounds per hour. P equals the process input weight rate in tons per hour;
  - (vi) Equipment in operation, or under construction contract, on or before January 1, 1972, shall be considered existing equipment. All equipment constructed or extensively altered after said date shall be considered new.
2. The New Source Performance Standards of 391-3-1-.02 (8) for such asphaltic concrete plants apply to all such plants commencing construction on or after the effective date of such standards.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047



(l) Conical Burners:

1. No conical burners under construction or modified after January 1, 1972, shall be allowed to operate unless the burner is equipped with combustion controls acceptable to the Division to minimize smoke emissions. To assure that these controls are in good maintenance and satisfactorily controlling the combustion process, the flue gas exit temperature shall be monitored with a sensing and recording device acceptable to the Division. These devices shall be maintained in good working order. The recording charts shall be kept on file and made available to the Division upon request.
2. No person shall cause, let, suffer, permit, or allow visible emissions from any conical burner, the opacity of which is equal to or greater than 40 percent.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	DEC 16, 1975	AUG 20, 1976	41 FR 35184
2nd Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047

PRINTED May 28, 2003

(m) Repealed.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF OCTOBER 3, 1975

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JUNE 30, 1975	OCT 3, 1975	40 FR 45818

(n) Fugitive Dust:

1. All persons responsible for any operation, process, handling, transportation or storage facility which may result in fugitive dust shall take all reasonable precautions to prevent such dust from becoming airborne. Some reasonable precautions which could be taken to prevent dust from becoming airborne include, but are not limited to, the following:
  - (i) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
  - (ii) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials, stockpiles, and other surfaces which can give rise to airborne dusts;
  - (iii) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods can be employed during sandblasting or other similar operations;
  - (iv) Covering, at all times when in motion, open bodied trucks, transporting materials likely to give rise to airborne dusts;
  - (v) The prompt removal of earth or other material from paved streets onto which earth or other material has been deposited.
2. The percent opacity from any fugitive dust source listed in paragraph (2)(n)1. above shall not equal or exceed 20 percent.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 18, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047

(o) Cupola Furnaces for Metallurgical Melting:

1. The emissions of particulate matter from all new and existing ferrous foundry cupolas with an input process weight rate in excess of fifty thousand (50,000) pounds per hour shall not exceed the amounts determined from Table Ic and the accompanying equation of the Rules and Regulations.
2. The emission of particulate matter from all new and existing ferrous foundry cupolas with an input process weight rate less than fifty thousand (50,000) pounds per hour shall not exceed the amounts determined from Table Ic of the Rules and Regulations except as follows:
  - (i) Any jobbing foundry which operates its cupola furnaces or furnaces intermittently to melt ten (10) tons or less per 24 hour day shall be deemed in compliance if particulate emissions do not exceed six (6) pounds per ton of metal melted.

**Table Ic**

<b>Particulate Emissions from Ferrous Foundries</b>	
<b>Process Weight (lbs/hr)</b>	<b>Maximum Weight Discharge (lbs/hr)</b>
1,000	3.05
2,000	4.70
3,000	6.35
4,000	8.00
5,000	9.58
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
16,000	21.60
18,000	23.40
20,000	25.10
30,000	31.30
40,000	33.76
50,000	35.40

PRINTED May 28, 2003

THIS IS THE FEDERALLY APPROVED REGULATION AS OF MAY 31, 1972

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842

(p) Particulate Emissions from Kaolin and Fuller's Earth Processes:

1. The following equations shall be used to calculate the allowable rates of emission from kaolin and fuller's earth process equipment constructed or extensively modified after January 1, 1972, and shall accompany Table IIa:
  - (i)  $E = 3.59P^{0.62}$ ; for process weight rate up to and including 30 tons per hour;
  - (ii)  $E = 17.31P^{0.16}$ ; for process input weight rate in excess of 30 tons per hour.
2. The following equation shall be used to calculate the allowable rates of emission from kaolin and fuller's earth process equipment constructed or put in operation on or before January 1, 1972, and shall accompany Table IIb:
  - (i)  $E = 4.1P^{0.67}$ ; for process weight input weight rate up to and including 30 tons per hour.
  - (ii)  $E = 55P^{0.11} - 40$ ; for process weight input rate above 30 tons per hour.
3. The combined particulate emissions from any kaolin or fuller's earth plant site shall not exceed 250 pounds per hour.

E = allowable emission rate in pounds per hour;  
 P = process input weight rate in tons per hour.

**Table IIa**

<b>Allowable Rate of Emissions from Kaolin and Fuller's Earth Processes on New and Modified Equipment</b>	
<b>Process Input Weight Rate (lbs/hr)</b>	<b>Rate of Emissions (lbs/hr)</b>
50	0.03
100	0.55
500	1.53
1,000	2.25
5,000	6.34
10,000	9.73
20,000	14.99
60,000	29.60
80,000	31.19
120,000	33.28
160,000	34.85
200,000	36.11
400,000	40.35
1,000,000	46.72

**Table IIb**

<b>Allowable Rate of Emissions from Kaolin and Fuller's Earth Processes on Existing Equipment</b>					
Process Input Weight Rate		Rate of Emission	Process Input Weight Rate		Rate of Emission
lbs/hr	tons/hr	lbs/hr	lbs/hr	tons/hr	lbs/hr
100	0.05	0.551	16,000	8	16.5
200	0.10	0.877	18,000	9	17.9
400	0.20	1.40	20,000	10	19.2
600	0.30	1.83	30,000	15	25.2
800	0.40	2.22	40,000	20	30.5
1,000	0.50	2.58	50,000	25	35.4
1,500	0.75	3.38	60,000	30	40.0
2,000	1.00	4.10	70,000	35	41.3
2,500	1.25	4.76	80,000	40	42.5
3,000	1.50	5.38	90,000	45	43.6
3,500	1.75	5.96	100,000	50	44.6
4,000	2.00	6.52	120,000	60	46.3
5,000	2.50	7.58	140,000	70	47.8
6,000	3.00	8.56	160,000	80	49.0
7,000	3.50	9.49	200,000	100	51.2
8,000	4.00	10.4	1,000,000	500	69.0
9,000	4.50	11.2	2,000,000	1,000	77.6
10,000	5.00	12.0	6,000,000	3,000	92.7
12,000	6.00	13.6			

THIS IS THE FEDERALLY APPROVED REGULATION AS OF AUGUST 20, 1976

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	DEC 16, 1975	AUG 20, 1976	41 FR 35184

(q) Particulate Emissions from Cotton Gins:

1. The emission of particulate matter from any cotton ginning operation shall not exceed the amounts determined from Table IIIa and from the accompanying equation of the Rules and Regulations.

- (i) The following equation shall be used to calculate the allowable rates of emission and shall accompany Table IIIa:

$$E = 7 B^{0.5}$$

E = allowable emission rate in pounds per hour

B = number of standard bales per hour -- A standard bale is defined as a finished bale weighing 500 pounds.

**Table IIIa**

Particulate Emissions from Cotton Gins	
No. of Bales/hr	Allowable-lbs/hr
1	7.00
2	9.00
3	12.12
4	14.00
5	15.65
6	17.15
7	18.52
8	19.80
9	21.00
10	22.14
11	23.22
12	24.25
13	25.24
14	26.19
15	27.11
16	28.00
17	28.86
18	29.69
19	30.51
20	31.30



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THIS IS THE FEDERALLY APPROVED REGULATION AS OF MAY 31, 1972

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842

(r) Particulate Emissions from Granular and Mixed Fertilizer Manufacturing Units:

1. For the purpose of this regulation of the ammoniator, dryer, cooler and associated equipment will be considered one unit.
2. The following equations shall be used to calculate the allowable rates of emission from granular and mixed fertilizer manufacturing units:

(i)  $E = 3.59 P^{0.62}$ ; for production rates up to and including 30 tons per hour;

(ii)  $E = 17.31 P^{-1.6}$ ; for production rates above 30 tons per hour;

E = allowable emission rate in pounds per hour;

P = production rate of finished product in tons per hours. Recycle will not be included.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF MAY 31, 1972

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842

(t) VOC Emissions from Automobile and Light Duty Truck Manufacturing:

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from automobile and/or light duty truck manufacturing facilities to exceed:
  - (i) 1.2 pounds of VOC per gallon of coating, excluding water, as a monthly weighted average, from each electrophoretic applied prime operation;
  - (ii) 15.1 pounds of VOC per gallon of applied coating solids, as a daily weighted average, from each spray prime operation;
  - (iii) 15.1 pounds of VOC per gallon of applied coating solids, as a daily weighted average, from each topcoat operation;
  - (iv) 4.8 pounds of VOC per gallon of coating delivered to the coating applicator from each final repair operation. If any coating delivered to the coating applicator contains more than 4.8 pounds of VOC per gallon of coating, the limit shall be 13.8 pounds of VOC per gallon of coating solids sprayed, as a daily weighted average.
  - (v) 3.5 pounds of VOC per gallon of sealer, excluding water, delivered to an applicator that applies sealers in amounts less than 25,000 gallons during a 12 consecutive month period;
  - (vi) 1.0 pounds of VOC per gallon of sealer, excluding water, delivered to a coating applicator that applies sealers in amounts greater than 25,000 gallons during a 12 consecutive month period;
  - (vii) 3.5 pounds of VOC per gallon of adhesive, excluding water, delivered to an applicator that applies adhesives, except body glass adhesives;
  - (viii) 6.9 pounds of VOC per gallon of cleaner, excluding water, delivered to an applicator that applies cleaner to the edge of body glass prior to priming;
  - (ix) 5.5 pounds of VOC per gallon of primer, excluding water, delivered to an applicator that applies primer to the body glass or to the body to prepare the glass and body for bonding;
  - (x) 1.0 pounds of VOC per gallon of adhesive, excluding water, delivered to an applicator that applies adhesive to bond body glass to the body;
  - (xi) 4.4 pounds of VOC per gallon of coating delivered to any applicator that applies clear coating to fascias. No coating may be used that exceeds this limit;
  - (xii) 4.4 pounds of VOC per gallon of coating delivered to any applicator that applies base coat to fascias, on a daily weighted average basis;
  - (xiii) 3.5 pounds of VOC per gallon of material, excluding water, for all other materials not subject to some other emission limitation stated in this paragraph.
2. The emission limits stated in paragraph 1, shall be achieved by the application of low solvent technology or a system demonstrated to have equivalent control efficiency on the basis of pounds of VOC per gallon of solids.
3. No person shall cause, let, permit, suffer or allow the emissions of VOC from the use of wipe-off solvents to exceed 1.0 pounds per unit of production, as a rolling, 12-month average. Wipe-off solvents shall include those solvents used to clean dirt, grease, excess sealer and adhesive, or other foreign matter from the car body in preparation for painting or other production-related operation.

4. No person shall cause, let permit, suffer or allow the emission of VOCs from solvents used to purge, flush or clean paint application systems including paint lines, tanks and applicators, unless such solvents are captured to the maximum degree feasible by being directed into containers that prevent evaporation into the atmosphere.
5. No person shall store solvents or waste solvents in drums, pails, cans or other containers unless such containers have air-tight covers which are in place at all times when materials are not being transferred into or out of the container.
6. No person shall cause, let, permit, suffer or allow the emissions of VOC from the cleaning of oil and grease stains on the body shop floor to exceed 0.1 pounds per unit of production.
7. For the purpose of this subsection, the following definitions apply:
  - (i) "Manufacturing Plant" means a facility which assembles twenty (20) or more automobiles or light duty trucks per day (either separately or in combination) ready for sale to vehicle dealers. Customizers, body shops, and other repainters are not part of this definition;
  - (ii) "Automobile" means all passenger cars or passenger car derivatives capable of seating a maximum of 12 or fewer passengers;
  - (iii) "Light-Duty Trucks" means any motor vehicles rated 8500 pounds gross weight or less which are designated primarily for the purpose of transportation or are derivatives of such vehicles;
  - (iv) "Electrophoretic Applied Prime Operation" means the dip tank, flash-off area and bake oven(s) which are used to apply and dry or cure the initial coating on components of automobile and light-duty truck bodies by submerging the body components in a coating bath with an electrical potential difference between the components and the bath and drying or curing such coating on the components in bake oven(s);
  - (v) "Spray Prime Operation" means the spray prime booth, flash-off area and bake oven(s) which are used to apply and dry or cure a surface coating between the electrophoretic applied prime and topcoat operations on the components of automobile and light-duty truck bodies;
  - (vi) "Topcoat Operation" means the topcoat spray booth, flash-off area and bake oven(s) which are used to apply and dry or cure the final coating(s) on the components of automobile and light-duty truck bodies;
  - (vii) "Final Repair Operation" means the final repair spray booth, flash-off area and bake oven(s) which are used to apply and dry or cure the final repair coating(s) on automobile and light-duty truck bodies after they are fully assembled.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF FEBRUARY 02, 1996

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
1st Revision:	MAR 09, 1979	SEP 18, 1979	44 FR 54047
2nd Revision:	JAN 03, 1991	OCT 13, 1992	57 FR 46780
	APR 03, 1991	OCT 13, 1992	57 FR 46780
3rd Revision:	NOV 15, 1994	FEB 02, 1996	61 FR 3817

(u) VOC Emissions from Can Coating:

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from can coating operations to exceed:
  - (i) 2.8 pounds per gallon, excluding water, delivered to the coating applicator from sheet basecoat (exterior and interior) and overvarnish or two-piece can exterior (basecoat and overvarnish) operations;
  - (ii) 4.2 pounds per gallon, excluding water, delivered to the coating applicator from two and three-piece can interior body spray and two-piece can exterior end (spray and roll coat) operations;
  - (iii) 5.5 pounds per gallon, excluding water, delivered to the coating applicator from three-piece can side-seam spray operations;
  - (iv) 3.7 pounds per gallon, excluding water, delivered to the coating applicator from end seal compound operations.
2. The emission limits in this subsection shall be achieved by:
  - (i) the application of low solvent content coating technology (compliance may be demonstrated by averaging on a 24-hour weighted basis all VOC emissions from a single can coating line or operation not complying under (ii) or (iii) of this paragraph; averaging across lines is not allowed); or
  - (ii) incineration, with a capture system approved by the Director, provided that 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or
  - (iii) control equipment demonstrated to have control efficiency equivalent to or greater than required in (i) or (ii) of this paragraph, and approved by the Director.
3. For the purpose of this subsection, the following definitions apply:
  - (i) "End Sealing Compound" means a synthetic rubber compound which is coated onto can ends and which functions as a gasket when the end is assembled on the can;
  - (ii) "Exterior Base Coating" means a coating applied to the exterior protection to the metal and to provide background for the lithographic or printing operation;
  - (iii) "Interior Base Coating" means a coating applied by roller coater or spray to the interior of a can to provide a protective lining between the can metal and product;
  - (iv) "Interior Body Spray" means a coating sprayed on the interior of the interior of the can body to provide a protective film between the product and the can;
  - (v) "Overvarnish" means a coating applied directly over ink to reduce the coefficient of friction, to provide gloss and to protect the finish against abrasion and corrosion;
  - (vi) "Three-piece Can Side-seam Spray" means a coating sprayed on the exterior and interior of a welded, cemented or solder seam to protect the exposed metal;
  - (vii) "Two-piece Can Exterior End Coating" means a coating applied by rolling coating or spraying to the exterior end of a can to provide protection to the metal.

PRINTED May 28, 2003

THIS IS THE FEDERALLY APPROVED REGULATION AS OF OCTOBER 13, 1992

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
1st Revision:	MAR 09, 1979	SEP 18, 1979	44 FR 54047
2nd Revision:	JAN 03, 1991	OCT 13, 1992	57 FR 46780
	APR 03, 1991	OCT 13, 1992	57 FR 46780

(v) VOC Emissions from Coil Coating:

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from coil coating operations to exceed:
  - (i) 2.6 pounds per gallon, excluding water, delivered to the coating applicator from prime and topcoat or singlecoat operations;
  - (ii) The emission limits in this subsection shall apply to the coating applicator(s), oven(s) and quench area(s) of coil coating lines involved in prime and topcoat or single coat operations.
2. The emission limits in this subsection shall be achieved by:
  - (i) the application of low solvent content coating technology (compliance may be demonstrated by averaging on a 24-hour weighted basis all VOC emissions from a single coil coating line or operation not complying under (ii) or (iii) of this paragraph; averaging across lines is not allowed); or
  - (ii) incineration, with a capture system approved by the Director, provided that 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or
  - (iii) control equipment demonstrated to have control efficiency equivalent to or greater than required in (i) or (ii) of this paragraph, and approved by the Director.
3. For the purpose of this subsection, the following definitions apply:
  - (i) "Coil coating" means the coating of any flat metal sheet or strip that comes in rolls or coils;
  - (ii) "Quench Area" means a chamber where the hot metal exiting the oven is cooled by either a spray of water or a blast of air followed by water cooling.

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(w) VOC Emissions from Paper Coating:

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from paper coating operations to exceed:
  - (i) 2.9 pounds per gallon, excluding water, delivered to the coating applicator from a paper coating line. This limit shall apply to roll, knife or rotogravure coater(s) and drying oven(s) of paper coating.
2. The emissions limits in this subsection shall be achieved by:
  - (i) the application of low solvent content coating technology (compliance may be demonstrated by averaging on a 24-hour weighted basis all VOC emissions from a single paper coating line or operation not complying under (ii) or (iii) of this paragraph; averaging across lines is not allowed); or
  - (ii) incineration, with a capture system approved by the Director, provided that 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or
  - (iii) control equipment demonstrated to have control efficiency equivalent to or greater than required in (i) or (ii) of this paragraph, and approved by the Director.
3. For the purpose of this subsection, the following definitions apply:
  - (i) "Knife Coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate;
  - (ii) "Paper Coating" means the application of a coating on paper and pressure sensitive tapes regardless of substrate in which the coating is distributed uniformly across the web;
  - (iii) "Roll Coating" means the application of a coating material to a substrate by means of hard rubber or steel rolls;
  - (iv) "Rotogravure Coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

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(x) VOC Emissions from Fabric and Vinyl Coating:

1. No person shall cause, let, permit, suffer, or allow the emission of VOC from fabric or vinyl coating operations to exceed:
  - (i) 2.9 pounds per gallon, excluding water, delivered to the coating applicator from fabric coating lines;
  - (ii) 3.8 pounds per gallon, excluding water, delivered to the coating applicator from a vinyl coating line;
  - (iii) The emission limits in this subsection shall apply to roll, knife, or rotogravure coater(s) and drying oven(s) of fabric and vinyl coating lines.
2. The emission limits in this subsection shall be achieved by:
  - (i) the application of low solvent content coating technology (compliance may be demonstrated by averaging on a 24-hour weighted basis all VOC emissions from a single fabric and vinyl coating line or operation not complying under (ii) or (iii) of this paragraph; averaging across lines is not allowed); or
  - (ii) incineration, with a capture system approved by the Director, provided that 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or
  - (iii) control equipment demonstrated to have control efficiency equivalent to or greater than required in (i) or (ii) of this paragraph, and approved by the Director.
3. For the purpose of this subsection, the following definitions apply:
  - (i) "Fabric Coating" means the coating of a textile substrate with a knife, roll, or rotogravure coater to impart properties that are not initially present, such as strength, stability, water or acid repellence, or appearance;
  - (ii) "Knife Coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate;
  - (iii) "Roll Coating" means the application of a coating material to a substrate by means of hard rubber or steel rolls;
  - (iv) "Rotogravure Coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on a coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate;
  - (v) "Vinyl Coating" means applying a decorative or protective topcoat, or printing on vinyl coated fabric or vinyl sheets, but shall not mean applying plastisol coating.

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(y) VOC Emissions from Metal Furniture Coating:

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from metal furniture coating operations to exceed:
  - (i) 3.0 pounds per gallon, excluding water, delivered to the coating applicator from prime and topcoat of single coat operations;
  - (ii) The emission limit in this subsection shall apply to the application area(s), flashoff area(s) and oven(s) of metal furniture coating lines involved in prime and topcoat or single coat operations.
2. The emission limit in this subsection shall be achieved by:
  - (i) the application of low solvent content coating technology (compliance may be demonstrated by averaging on a 24-hour basis all VOC emissions from a single metal furniture coating line or operation not complying under (ii) or (iii) of this paragraph; averaging across lines is not allowed); or
  - (ii) incineration, with a capture system approved by the Director, provided that 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or
  - (iii) control equipment demonstrated to have control efficiency equivalent to or greater than required in (i) and (ii) of this paragraph, and approved by the Director.
3. For the purpose of this subsection, the following definitions apply:
  - (i) "Application Area" means the area where the coating is applied by spraying, dipping or flow coating techniques;
  - (ii) "Metal Furniture Coating" means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece.

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(z) VOC Emissions from Large Appliance Surface Coating:

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from the surface coating of large appliances to exceed:
  - (i) 2.8 pounds per gallon, excluding water, delivered to the coating applicator from prime, single or topcoat operations;
  - (ii) The emission limit in this subsection shall apply to the application area(s), flashoff area(s) and oven(s) of large appliance coating operations;
  - (iii) The emission limit in this subsection shall not apply to the use of quick drying lacquers used for repair of scratches and nicks.
2. The emission limit in this subsection shall be achieved by:
  - (i) the application of low solvent content coating technology (compliance may be demonstrated by averaging on a 24-hour weighted basis all VOC emissions from a single large appliance surface coating line or operation not complying under (ii) or (iii) of this paragraph; averaging across lines is not allowed); or
  - (ii) incineration, with a capture system approved by the Director, provided that 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or
  - (iii) control equipment demonstrated to have control efficiency equivalent to or greater than required in (i) or (ii) of this paragraph, and approved by the Director.
3. For the purpose of this subsection, the following definitions apply:
  - (i) "Application Area" means the area where the coating is applied by spraying, dipping or flowcoating techniques;
  - (ii) "Single Coat" means a single film of coating applied directly to the metal substrate omitting the primer application;
  - (iii) "Large Appliances" means doors, cases, lids, panels and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners and other similar products.

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(aa) VOC Emissions from Wire Coating:

1. No person shall cause, let, permit, suffer, or allow the emission of VOC from wire coating operations to exceed:
  - (i) 1.7 pounds per gallon, excluding water, delivered to the coating applicator from wire coating operations;
  - (ii) The emission limit in this subsection shall apply to the oven(s) of wire coating operations.
2. The emission limits in this subsection shall be achieved by:
  - (i) the application of low solvent content coating technology (compliance may be demonstrated by averaging on a 24-hour weighted basis all VOC emissions from a single wire coating line or operation not complying under (ii) or (iii) of this paragraph; averaging across lines is not allowed); or
  - (ii) incineration, with a capture system approved by the Director, provided that 90 percent of the nonmethane volatile organic compound (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or
  - (iii) control equipment demonstrated to have control efficiency equivalent to or greater than required in (i) or (ii) of this paragraph, and approved by the Director.
3. For the purpose of this subsection, the following definitions apply:
  - (i) "Wire Coating" means the process of applying a coating of electrically insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.

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(bb) Petroleum Liquid Storage:

1. No person shall cause, let, permit, suffer, or allow the use of a fixed roof storage vessel with capacities of 40,000 gallons or greater containing a volatile petroleum liquid where true vapor pressure is greater than 1.52 psia unless:
  - (i) the vessel has been fitted with a floating roof; or
  - (ii) the vessel has been fitted with control equipment demonstrated to have control efficiency equivalent to or greater than required in (i) of this paragraph, and approved by the Director.
2. The requirements of this subsection shall not apply to vessels:
  - (i) underground, if the total volume of petroleum liquids added to and taken from the tank annually does not exceed twice the volume of the tank; or
  - (ii) having capacities less than 425,000 gallons used to store crude oil prior to lease custody transfer.
3. For the purpose of this subsection, the following definitions apply:
  - (i) "Crude Oil" means a naturally occurring mixture which consists of hydrocarbons and/or sulfur, nitrogen and/or oxygen derivatives of hydrocarbons and which is a liquid at standard conditions;
  - (ii) "Floating Roof" means a storage vessel cover consisting of a double deck, pontoon single deck, internal floating cover or covered floating roof, which rests upon and is supported by the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and tank wall;
  - (iii) "Petroleum Liquids" means crude oil, condensate, and any finished or intermediate products manufactured in a petroleum refinery;
  - (iv) "Petroleum Refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of crude oils, or through redistillation, cracking, extraction, or reforming of unfinished petroleum derivatives;
  - (v) "True Vapor Pressure" means the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, "Evaporation Loss from Floating Roof Tanks," 1962.

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(cc) Bulk Gasoline Terminals:

1. No person may load gasoline into any tank trucks or trailers from any bulk gasoline terminal unless:
  - (i) The bulk gasoline terminal is equipped with vapor control equipment capable of complying with subparagraph 1.(v) of this paragraph 1., properly installed, in good working order, in operation, and consisting of one of the following:
    - (I) An absorber or condensation equipment which processes and recovers at least 90 percent of all vapors and gases from the equipment being controlled; or
    - (II) Vapor collection equipment which directs all vapors to a fuel gas system; or
    - (III) Control equipment demonstrated to have control efficiency equivalent to or greater than required in (I) or (II) of this paragraph, and approved by the Director; and
  - (ii) All displaced vapors and gases are vented only to the vapor control equipment; and
  - (iii) Complete drainage of any loading arm will be accomplished before it is removed from the tank; and
  - (iv) All loading and vapor lines are equipped with fittings which make vapor-tight connections and which close automatically when disconnected, or a loading arm with vapor return line and hatch seal designed to prevent the escape of gases and vapors while loading;
  - (v) Sources and persons affected under this subsection may not allow mass emissions of volatile organic compounds from control equipment to exceed 4.7 grains per gallon of gasoline loaded.
2. Sources and persons affected under this subsection shall comply with the vapor collection and control system requirements of Rule 391-3-1-.02(2)(ss).
3. The requirements of this subsection shall not apply to loading of gasoline into tank trucks or trailers of less than 3000 gallons capacity outside those counties of Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, Paulding, and Rockdale.
4. The requirements of this subsection shall apply to loading of gasoline into tank trucks or trailers of less than 3000 gallons capacity inside those counties of Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, Paulding, and Rockdale after July 1, 1991.
5. For the purpose of this subsection, the following definitions apply:
  - (i) "Bulk Gasoline Terminal" means a gasoline storage facility which receives gasoline from refineries primarily by pipeline, ship, or barge, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by tank truck and has an average daily throughput of more than 20,000 gallons of gasoline.
  - (ii) "Gasoline" means a petroleum distillate having a Reid vapor pressure of 4 psia or greater.

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(dd) Cutback Asphalt:

1. After January 1, 1981, no person may cause, allow or permit the use of cutback asphalts for paving purposes except as necessary for:
  - (i) long-life stockpile storage; or
  - (ii) the use or application at ambient temperatures less than 50 degrees F; or
  - (iii) solely as a penetrating prime coat; or
  - (iv) base stabilization.
2. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Asphalt" means a dark-brown to black cementitious material (solid, semisolid, or liquid in consistency) in which the predominating constituents are bitumens which occur in nature as such or which are obtained as residue in refining petroleum;
  - (ii) "Cutback Asphalt" means asphalt cement which has been liquefied by blending with petroleum solvents (diluent)s. Upon exposure to atmospheric conditions the diluents evaporate, leaving the asphalt cement to perform its function;
  - (iii) "Penetrating Prime Coat" means an application of low viscosity liquid asphalt to an absorbent surface. It is used to prepare as untreated base for an asphalt surface. The prime penetrates the base and plugs the voids, hardens the top, and helps bind it to the overlying asphalt course. It also reduces the necessity of maintaining an untreated base course prior to placing the asphalt pavement.

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(ee) Petroleum Refinery:

1. Persons responsible for any vacuum producing system at a petroleum refinery shall control the emissions of any noncondensable volatile organic compound from the condensers, hot wells or accumulators by:
  - (i) Piping the noncondensable vapors to a firebox or incinerator; or
  - (ii) Compressing the vapors and adding them to the refinery fuel gas; or
  - (iii) Controlling the vapors by using control equipment demonstrated to have control efficiency equivalent to or greater than required in (i) or (ii) of this paragraph, and approved by the Director.
2. Persons responsible for any wastewater (oil/water) separator at a petroleum refinery shall:
  - (i) Provide covers and seals approved by the Director, on all separators and forebays; and
  - (ii) Equip all openings in covers, separators, and forebays with lids or seals such that the lids or seals are in the closed position at all times except when in actual use.
3. Before January 1, 1980 the owner or operator of any affected petroleum refinery located in this State shall develop and submit to the Director for approval a detailed procedure for minimization of volatile organic compound emissions during process unit turnaround. As a minimum, the procedure shall provide for:
  - (i) Depressurization venting of the process unit or vessel to a vapor recovery system, flare or firebox; and
  - (ii) No emission of volatile organic compounds from a process unit or vessel unless its internal pressure is 19.7 psi or less.
4. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Accumulator" means the reservoir of a condensing unit receiving the condensate from the condenser;
  - (ii) "Condenser" means any heat transfer device used to liquefy vapors by removing their latent heats of vaporization. Such devices include, but are not limited to, shell and tube, coil, surface, or contact condensers;
  - (iii) "Firebox" means the chamber or compartment of a boiler or furnace in which materials are burned but does not mean the combustion chamber of an incinerator;
  - (iv) "Forebays" means the primary sections of a wastewater separator;
  - (v) "Hot Well" means the reservoir of a condensing unit receiving the warm condensate from the condenser;
  - (vi) "Petroleum Refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation, cracking, extraction, or refining of unfinished petroleum derivatives;
  - (vii) "Refinery Fuel Gas" means any gas which is generated by a petroleum refinery process unit and which is combusted, including any gaseous mixture of natural gas and fuel gas;
  - (viii) "Turnaround" means the procedure of shutting a refinery unit down after a run to do necessary maintenance and repair work and putting the unit back on stream;

- (ix) "Vacuum Producing System" means any reciprocating, rotary, or centrifugal blower or compressor, or any jet ejector or device that takes suction from a pressure below atmospheric and discharges against atmospheric pressure;
- (x) "Vapor Recovery System" means a system that prevents releases to the atmosphere of no less than 90 percent by weight of organic compounds emitted during the operation of any transfer, storage, or process equipment;
- (xi) "Wastewater (oil/water) Separator" means any device or piece of equipment which utilizes the difference in density between oil and water to remove oil and associated chemicals from water or any device, such as a flocculation tank, clarifier, etc., which removes petroleum derived compounds from wastewater.

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(ff) Solvent Metal Cleaning:

1. No person shall cause, suffer, allow or permit the operation of a cold cleaner degreaser unless the following requirements for control of emissions of the volatile organic compounds are satisfied:
  - (i) The degreaser shall be equipped with a cover to prevent the escape of volatile organic compounds during periods of non-use;
  - (ii) The degreaser shall be equipped with a facility for draining cleaned parts before removal;
  - (iii) If used, the solvent spray must be a solid, fluid stream (not a fine, atomized or shower type spray) and at a pressure which does not cause excessive splashing;
  - (iv) If the solvent volatility is 0.60 psi or greater measured at 100 degrees F, or if the solvent is heated above 120 degrees F, then one of the following control devices must be used:
    - (I) Freeboard that gives a freeboard ratio of 0.7 or greater;
    - (II) Water cover (solvent must be insoluble in and heavier than water);
    - (III) Other systems of equivalent control, such as a refrigerated chiller or carbon adsorption.
  - (v) Waste solvent shall be stored only in covered containers and shall not be disposed of by such a method as to allow excessive evaporation into the atmosphere.
2. No person shall cause, suffer, allow, or permit the operation of an open top vapor greaser unless the following requirements for control of emissions of volatile organic compounds are satisfied:
  - (i) The degreaser shall be equipped with a cover to prevent the escape of volatile organic compounds during periods of non-use;
  - (ii) The degreaser shall be equipped with one of the following control devices:
    - (I) Freeboard ratio greater than or equal to 0.75;
    - (II) Refrigerated chiller;
    - (III) Enclosed design (cover for door opens only when the dry part is actually entering or exiting the degreaser);
    - (IV) Carbon adsorption system, with ventilation greater than 50 cfm/ft<sup>2</sup> of air/vapor area (when cover is open), and exhausting less than 25 ppm solvent averaged over one complete adsorption cycle; or
    - (V) Control equipment demonstrated to have control efficiency equivalent to or better than any of the above.
  - (iii) The degreaser shall be operated in accordance with the following procedures. Operating instructions summarizing these procedures shall be displayed on the degreaser.
    - (I) Keep cover closed at all times except when processing work loads through degreaser;
    - (II) Minimize solvent carry-out by the following measures:
      - I. Rack parts to allow full drainage;

- II. Degrease the work load in the vapor zone at least 30 seconds or until condensation ceases;
  - III. Tip out any pools of solvent on the cleaned parts before removal;
  - IV. Allow parts to dry within the degreaser for at least 15 seconds or until visually dry.
- (III) Do not degrease porous or adsorbent materials, such as cloth, leather, wood or rope;
  - (IV) Work loads should not occupy more than half of the greaser's open top area;
  - (V) The vapor level should not drop more than 4 inches when the work load enters the vapor zone;
  - (VI) Never spray the vapor level;
  - (VII) Repair solvent leaks immediately, or shutdown the degreaser.
  - (VIII) Ventilation fans should not be used near the degreaser opening;
  - (IX) Water should not be visually detectable in solvent exiting the water separator.
- (iv) Waste solvent shall be stored only in covered containers and shall not be disposed of or transferred to another party by such a method as to allow excessive evaporation into the atmosphere.
3. No person shall cause, suffer, allow, or permit the operation of a conveyORIZED degreaser unless the following requirements for control of emissions of the volatile organic compounds are satisfied.
- (i) The degreaser shall be equipped with a cover to prevent the escape of volatile organic compounds during periods of non-use;
  - (ii) The degreaser shall be equipped with either a drying tunnel, or other means such as rotating (tumbling) basket, sufficient to prevent cleaned parts from carrying out solvent liquid or vapor;
  - (iii) The degreaser shall be equipped with one of the following:
    - (I) Refrigerated chiller;
    - (II) Carbon adsorption system, with ventilation greater than 50 cfm ft<sup>2</sup> of air/vapor area (when down-time covers are open), and exhausting less than 25 ppm of solvent by volume averaged over a complete adsorption cycle; or
    - (III) Control equipment demonstrated to have control efficiency equivalent to or better than any of the above.
  - (iv) The degreaser shall be operated in accordance with the following procedure. Operating instructions summarizing these procedures shall be displayed on the degreaser.
    - (I) Exhaust ventilation should not exceed 65 cfm per ft<sup>2</sup> of degreaser opening, unless necessary to meet OSHA requirements. Work place and should not be used near the degreaser opening;
    - (II) Minimize carry-out emissions by:
      - I. Racking parts for best drainage;
      - II. Maintaining vertical conveyer speed at less than 11 ft/min.

- (III) Repair solvent leaks immediately, or shutdown the degreaser;
  - (IV) Water should not visibly be detectable in the solvent exiting the water separator;
  - (V) Down-time cover must be placed over entrances and exits of conveyORIZED degreasers immediately after the conveyor and exhaust are shutdown and removed just before they are started up.
  - (v) Waste solvent shall be stored only in covered containers and shall not be disposed of or transferred to another party by such a method as to allow excessive evaporation into the atmosphere.
4. The following requirements apply to degreasers using trichloroethylene, carbon tetrachloride, and/or chloroform in a total concentration greater than 5 percent by weight:
- (i) Degreasers constructed or reconstructed after November 29, 1993 shall comply with paragraph 391-3-1-.02(9)(b)34. "Emission Standard for Hologenated Solvent Cleaning, 40 CFR 63, Subpart T, as amended" (NESHAP) and not paragraphs 1. through 3. of this subsection (ff) (Georgia Rule).
  - (ii) Existing degreasers (constructed or reconstructed on or before November 29, 1993) shall comply with paragraphs 1. through 3. of this subsection (ff) (Georgia Rule) until December 2, 1997; after which they must comply with paragraph 391-3-1-.02(b)34 (NESHAP).
  - (iii) An existing degreaser (as defined above) may elect to comply with paragraph 391-3-1-.02(9)(b)34 prior to December 2, 1997. In such case, they are not required to comply with Paragraphs 1. through 3. of this subsection (ff) (Georgia Rule) once they are in compliance with paragraph 391-3-1-.02(9)(b)34 (NESHAP).
  - (iv) Any facility which currently complies with paragraphs 391-3-1-.02(ff) 1 through 3 (Georgia Rule) which will be changing to comply with paragraph 391-3-1-.02(9)(b)34 (NESHAP) should submit a schedule of construction/modification for changes necessary to comply with 391-3-1-.02(9)(b)34 (NESHAP) as soon as practically possible but no later than 60 days prior to any construction/modification.

5. For the purpose of this subsection, the following definitions shall apply:

- (i) "Cold Cleaning" means the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition;
- (ii) "Conveyorized Degreasing" means the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized solvents;
- (iii) "Freeboard Height" means the distance from the top of vapor zone to the top of the degreaser tank;
- (iv) "Freeboard Ratio" means the freeboard height divided by the width (smallest dimension) of the degreaser;
- (v) "Open Top Vapor Degreasing" means the batch process of cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the colder metal parts;
- (vi) "Solvent Metal Cleaning" means the process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyorized degreasing.

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	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
1st Revision:	MAR 09, 1979	SEP 18, 1979	44 FR 54047
2nd Revision:	JAN 03, 1991	OCT 13, 1992	57 FR 46780
	APR 03, 1991	OCT 13, 1992	57 FR 46780
3rd Revision:	JUN 17 1996	APR 26, 1999	64 FR 20186

(gg) Kraft Pulp Mills:

1. Except as provided for in paragraph 2. of this subsection, no person shall cause, let, suffer, permit or allow the emissions of TRS from any kraft pulp mill in operation, or under construction contract, on or before September 24, 1976, in amounts equal to or exceeding the following:
  - (i) Recovery Furnaces:
    - (I) Old Recovery Furnaces: 20 parts per million of TRS on a dry basis and as a 24-hour average, corrected to 8 volume percent oxygen; or
    - (II) New Recovery Furnaces: 5 parts per million of TRS on a dry basis and as a 24-hour average, corrected to 8 volume percent oxygen; or
    - (III) Cross Recovery Furnaces: 25 parts per million of TRS on a dry basis and as a 24-hour average, corrected to 8 volume percent oxygen.
  - (ii) Digester System or Multiple-Effect Evaporator System" 5 parts per million of TRS on a dry basis and a 24-hour average, corrected to 10 volume percent oxygen unless the following conditions are met:
    - (I) The gases are combusted in a lime kiln subject to the provisions of paragraph (iv) of this subsection; or
    - (II) The gases are combusted in a recovery furnace subject to the provisions of paragraph (i) of this subsection; or
    - (III) The gases are combusted with other gases in an incinerator or other device, or combusted in a lime kiln or recovery boiler not subject to the provisions of this subsection, and are subjected to a minimum temperature of 1200 degrees F for at least 0.5 second; or
    - (IV) The gases are controlled by a means other than combustion. In this case, the gases discharged shall not contain TRS in excess of 5 parts per million on a dry basis and as a 24-hour average, corrected to the actual oxygen content of the untreated gas stream.
  - (iii) Smelt Dissolving Tanks: 0.0168 pounds of TRS per ton of black liquor solids (dry weight).
  - (iv) Lime Kilns: 40 parts per million of TRS on a dry basis and as a 24-hour average, corrected to 10 volume percent oxygen.
2. Nothing in paragraph 1. shall prevent the owner or operator of a kraft pulp mill subject to the provisions of this subsection (gg) from applying to the Director for permission to control TRS emissions from the kraft pulp mill under the provisions of this subparagraph provided that:
  - (i) General Provisions:
    - (I) The owner or operator of such kraft pulp mill make such application in writing no later than six months following the notification date; and
    - (II) In the event that the kraft pulp mill contains TRS emitting process equipment which is subject to the New Source Performance Standard for Kraft Pulp Mills, 39 1-3-1-.02(2)(b)23., then that TRS emitting process equipment must also comply with the applicable New Source Performance Standard TRS emission limitation(s);



- (III) The owner or operator of such kraft pulp mill may not elect to control TRS emissions from process equipment not subject to the provisions of this subsection (gg) in lieu of controlling TRS emissions from those sources subject to this subsection (gg); and
  - (IV) For the purpose of this paragraph 2.; the maximum allowable emissions of TRS shall be calculated using the production rate (annual average or most recent 12 months of record) for the kraft pulp mill expressed as tons of air dried pulp per day, and the allowable emission rate of TRS from the kraft pulp mill shall be expressed as pounds of TRS per ton of air dried pulp.
  - (V) For the purpose of this paragraph, "notification date" means September 12, 1988, or the date on which the US EPA grants final approval of the TRS compliance schedules of this paragraph 9., whichever is later.
- (ii) Emission Limitation: No person shall cause, let, suffer, permit, or allow the total emissions of TRS from the following processes: recovery furnace(s), lime kiln(s), smelt dissolving tank(s), digester system, multiple-effect evaporator system, equal to or exceeding the amount determined by the following formula:

$$A = RB + LK + 0.065 \text{ pounds of TRS per ton of air dried pulp;}$$

The values for the terms RB and LK shall be determined using the following formula:

$$LK = (0.20U + 0.04V)/U + V$$

$$RB = (0.15W + 0.15X + 0.60Y + 0.75Z)/W + X + Y + Z$$

Where:

A = the total amount of allowable TRS emissions from the kraft pulp mill expressed as pounds as TRS per ton of air dried pulp.

LK = the fraction of the total allowable emission of TRS in

RB = the fraction of the total allowable emission of TRS in pounds per ton of air dried pulp for recovery furnaces;

U = tons per hour of lime mud solids calcined in lime kiln(s) not subject to the New Source Performance Standard for Kraft Pulp Mills;

V = tons per hour of lime solids calcined in lime kiln(s) not subject to the New Source Performance Standard for Kraft Pulp Mills;

W = pounds per hour of black liquor solids burned in recovery furnace(s) subject to the New Source Performance Standard for Kraft Pulp Mills;

X = pounds per hour of black liquor solids burned in new recovery furnace(s);

Y = pounds per hour of black liquor solids burned in old recovery furnace(s);

Z = pounds per hour of black liquor solids burned in cross recovery furnace(s);

3. For the purpose of this subsection, the following definitions shall apply:

- (i) "New Recovery Furnace" means a recovery furnace which had stated in the purchase contract a TRS performance guarantee or which included in the purchase contract a statement that the control of air pollutants was a design objective and which has incorporated into its design: membrane wall or welded wall construction; and emission--control air systems.
- (ii) "Old Recovery Furnace" means a recovery furnace which is not classified as a new recovery furnace.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF SEPTEMBER 30, 1988

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2nd Revision:	JUN 03, 1988	SEP 30, 1988	53 FR 38290

(hh) Petroleum Refinery Equipment Leaks:

1. No person shall cause, let, suffer, or allow the use of petroleum refinery equipment unless:
  - (i) A plan is submitted to the Director by no later than July 1, 1981 for monitoring VOC leaks. Such a program must contain:
    - (I) A list of refinery units and the quarter in which they will be monitored;
    - (II) A copy of the log book format;
    - (III) The make and model of the monitoring equipment to be used.
  - (ii) Monitoring for potential VOC leaks is carried out no less frequently than:
    - (I) Yearly using detection equipment for pump seals, pipeline valves in liquid service, and process drains;
    - (II) Quarterly using detection equipment for compressor seals, pipeline valves in gaseous service, and pressure relief valves in gaseous service;
    - (III) Weekly by visible inspection for all pump seals;
    - (IV) Immediately using detection equipment for any pump seals from which liquids are observed dripping and immediately after repair of any component previously found to be leaking;
    - (V) Within 24 hours for a relief valve after it has vented to the atmosphere.
  - (iii) All components which have emissions with a VOC concentration exceeding 10,000 ppm, as determined by Method 21 of the reference in Section 391-3-1-.02(3)(a) of these Rules, shall be affixed with a weatherproof and readily visible tag, bearing an identification number and the date on which the leak is located. This tag shall remain in place until the leaking component is repaired.
  - (iv) Leaking components as defined by (iii) above which can be repaired without a unit shutdown shall be repaired and retested as soon as practicable but no later than 15 days after the leak is identified.
  - (v) Leaking components as defined by (iii) above which require unit shutdown for repair may be corrected at the regularly scheduled turnaround unless the Director at his discretion requires early unit turnaround based on the number and severity of tagged leaks awaiting turnaround.
  - (vi) Except for safety pressure relief valves, no owner or operator of a petroleum refinery shall install or operate a valve at the end of a pipe or line containing volatile organic compounds unless the pipe or line is sealed with a second valve, a blind flange, a plug, or a cap. The sealing device may be removed only when a sample is being taken or during maintenance operations.
  - (vii) Pipeline valves and pressure relief valves in gaseous volatile organic compound service shall be marked in some manner that will be readily obvious to both refinery personnel performing monitoring and the Director.
  - (viii) Pressure relief devices which are connected to an operation flare header, vapor recovery device, inaccessible valves, storage tank valves, and valves that are not externally regulated are exempt from the monitoring requirements of this rule.
2. The owner or operator of a petroleum refinery shall maintain a leaking components monitoring log. Copies of the monitoring log shall be retained by the owner or operator for a minimum of two years after the date on which the record was made or the report repaired and shall immediately be made available

to the Director, upon verbal or written request, at any reasonable time. The monitoring log shall contain the following data:

- (i) The name and the process unit where the component is located.
- (ii) The type of component (e.g., valve, seal).
- (iii) The tag number of the component.
- (iv) The date on which a leaking component is discovered.
- (v) The date on which a leaking component is repaired.
- (vi) The date and instrument reading of the recheck procedure after a leaking component is repaired.
- (vii) A record of the calibration of the monitoring instrument.
- (viii) Those leaks that cannot be repaired until turnaround.
- (ix) The total number of components checked and the total number of components found leaking.

3. The owner or operator of a petroleum refinery shall:

- (i) Submit a report to the Director by the fifteenth day of January, April, July, and October that lists all leaking components that were located during the previous three calendar months but not repaired within fifteen days, all leaking components awaiting unit turnaround, the total number of components inspected, and the total number of components found leaking.
- (ii) Submit a signed statement with the report attesting to the fact that all monitoring and repairs were performed as stipulated in the monitoring program.
- (iii) The first quarterly report shall be submitted to the Director no later than January 1, 1982.

4. The Director, upon written notice, may modify the monitoring, record keeping and reporting requirements.

5. For the purpose of this subsection, the following definitions apply:

- (i) "Petroleum refinery" means any facility engaged in producing gasoline, aromatics, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt, or other products through distillation of petroleum or through redistillation, cracking, rearrangement or reforming of unfinished petroleum derivatives.
- (ii) "Component" means any piece of equipment which has the potential to leak volatile organic compounds when tested in the manner described in subparagraph 1.(iii). These sources include, but are not limited to, pumping seals, compressor seals, seal oil degassing vents, pipeline valves, pressure relief devices, process drains, and open ended pipes. Excluded from these sources are valves which are not externally regulated.
- (iii) "Liquid service" means equipment which processes, transfers or contains a volatile organic compound or mixture of volatile organic compounds in the liquid phase.
- (iv) "Gas service" means equipment which processes, transfers or contains a volatile organic compound or mixture of volatile organic compounds in the gaseous phase.

- (v) "Valves not externally regulated" means valves that have no external controls, such as in-line check valves.
- (vi) "Refinery unit" means a set of compounds which are a part of a basic process operation, such as, distillation, hydrotreating, cracking or reforming of hydrocarbons.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF FEBRUARY 02, 1996

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	DEC 18, 1980	NOV 24, 1981	46 FR 57486
1st Revision:	JUN 24, 1994	FEB 02, 1996	61 FR 3817

(ii) VOC Emissions from Surface Coating of Miscellaneous Metal Parts and Products:

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from surface coating of miscellaneous parts and products to exceed:
  - (i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings;
  - (ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to 194 degrees F;
  - (iii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings and coating application systems.
2. If more than one emission limitation in this subsection applies to a specific coating, then the least stringent emission limitation shall be applied.
3. All VOC emissions from solvent washings shall be considered in the emission limitations unless the solvent is directed into containers that prevent evaporation into the atmosphere.
4. The emission limits in this subsection shall be achieved by:
  - (i) The application of low solvent content coating technology (compliance may be demonstrated by averaging on a 24-hour weighted basis all VOC emissions from a single surface coating of miscellaneous metal parts and products line or operation not complying under (ii) or (iii) of this paragraph; averaging across lines is not allowed); or
  - (ii) Incineration, with a capture system approved by the Director, provided that 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or
  - (iii) Control equipment demonstrated to have control efficiency equivalent to or greater or VOC emissions equal to or less than required in (i) or (ii) of this paragraph, and approved by the Director.
5. For the purpose of this subsection the following definitions apply:
  - (i) "Single coat" means one film of coating applied to a metal surface;
  - (ii) "Prime coat" means the first of two or more films of coating applied to a metal surface;
  - (iii) "Topcoat" means the final film or series of films of coating applied in a two-coat or more operation;
  - (iv) "Low solvent coating" means coatings which contain less organic solvent than the conventional coatings used by the industry. Low solvent coatings include water-borne, higher solids, electrodeposition and powder coatings;
  - (v) "Heat sensitive material" means materials which cannot consistently be exposed to temperatures greater than 200 degrees F;
  - (vi) "Transfer efficiency" means the weight (or volume) of coating solids adhering to the surface being coated divided by the total weight (or volume) of coating solids delivered to the applicator;
  - (vii) "Air dried coating" means coating which are dried by the use of air or forced warm air at temperatures up to 194 degrees F;

- (viii) "Clear coat" means a coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color;
- (ix) "Extreme performance coatings" means coatings designed for harsh exposure of extreme environmental conditions;
- (x) "Coating application systems" means all operations and equipment which applies, conveys, and dries a surface coating, including, but not limited to spray booths, flow coaters, flashoff areas, air dryers and ovens; and
- (xi) "Extreme environmental conditions" means exposure to any of: the weather all of the time, temperatures consistently above 200 degrees F, detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.
- (xii) Miscellaneous metal parts and products" shall not mean the following:
  - (I) automobiles and light-duty trucks;
  - (II) metal cans;
  - (III) flat metal sheets and strips in the form of rolls or coils;
  - (IV) magnet wire for use in electrical machinery;
  - (V) metal furniture;
  - (VI) large appliances;
  - (VII) aerospace manufacturing and rework operations;
  - (VIII) automobile refinishing;
  - (IX) customized top coating of automobiles and trucks, if production is less than 35 vehicles per day; and
  - (X) exterior of marine vessels.
- (xiii) "High performance architectural coating" means a coating needed to protect architectural subsections and which satisfies the most recent requirements of the Architectural Aluminum Manufacturer's Association Publication Number AA MA 605.2.

6. The requirements of this subsection shall not apply to facilities at which the potential to emit volatile organic compounds, from all surface coating of miscellaneous metal parts and products, is less than 10 tons per year.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF APRIL 26, 1999

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2nd Revision	JUN 17, 1996	APR 26, 1999	64 FR 20186
3 <sup>rd</sup> Revision	OCT 28, 1999	JUL 10, 2001	66 FR 35906

(jj) VOC Emissions from Surface Coating of Flat Wood Paneling:

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from surface coating of flat wood paneling to exceed:
  - (i) 6.0 pounds per 1000 square feet of coated finished product from printed interior panels, regardless of the number of coats applied;
  - (ii) 12.0 pounds per 1000 square feet of coated finished product from natural finish hardwood plywood panels, regardless of the number of coats applied; and
  - (iii) 10.0 pounds per 1000 square feet of coated finished product from Class II finishes on hardboard panels, regardless of the number of coats applied.
2. The emission limits in this subsection shall be achieved by:
  - (i) The application of low solvent content coating technology (compliance may be demonstrated by averaging on a 24-hour weighted basis all VOC emissions from a single surface coating of flat wood paneling line or operation not complying under (ii) or (iii) of this paragraph; averaging across lines is not allowed); or
  - (ii) Incineration, with a capture system approved by the Director, provided that 90 percent of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or
  - (iii) Control equipment demonstrated to have control efficiency equivalent to or greater or VOC emissions equal to or less than required in (i) or (ii) of this paragraph, and approved by the Director.
3. For the purpose of this section, the following definitions also apply:
  - (i) "Class II hardboard paneling finish" means finishes which meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.
  - (ii) "Hardboard" is a panel manufactured primarily from interfelted lignocellulosic fibers which are consolidated under heat and pressure in a hot press.
  - (iii) "Hardwood plywood" is plywood whose surface layer is a veneer of hardwood.
  - (iv) "Natural finish hardwood plywood panels" means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.
  - (v) "Thin particleboard" is a manufactured board 1/4 inch or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure.
  - (vi) "Printed interior panels" means panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.
  - (vii) "Tileboard" means paneling that has a colored waterproof surface coating.
  - (viii) "Coating application system" means all operations and equipment which apply, convey, and dry a surface coating, including, but not limited to, spray booths, flow coaters, conveyers, flashoff areas, air dryers and ovens.



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	APR 03, 1991	OCT 13, 1992	57 FR 46780

(kk) VOC Emissions from Synthesized Pharmaceutical Manufacturing:

1. The owner or operator of a synthesized pharmaceutical manufacturing facility shall:
  - (i) Control the volatile organic compound emissions from all reactors, distillation operations, crystallizers, centrifuges and vacuum dryers that emit 15 pounds per day or more of VOC. Surface condensers or equivalent controls shall be used, provided that:
    - (I) If surface condensers are used, the condenser outlet gas temperature must not exceed:
      - I. -13 degrees F when condensing VOC of vapor pressure greater than 5.8 psi, measured at 68 degrees F;
      - II. 5 degrees F when condensing VOC of vapor pressure greater than 2.9 psi, measured at 68 degrees F;
      - III. 32 degrees F when condensing VOC of vapor pressure greater than 1.5 psi, measured at 68 degrees F;
      - IV. 50 degrees F when condensing VOC of vapor pressure greater than 1.0 psi, measured at 68 degrees F;
      - V. 77 degrees F when condensing VOC of vapor pressure greater than 0.5 psi, measured at 68 degrees F.
    - (II) If equivalent controls are used, the VOC emissions must be reduced by at least as much as they would be using a surface condenser which meets the requirements of part (I) of this subparagraph.
  - (ii) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this regulation shall reduce the VOC emissions from all air dryers and production equipment exhaust systems;
    - (I) By at least 90 percent if emissions are 330 pounds per day or more of VOC; or
    - (II) 33 pounds per day or less if emissions are less than 330 pounds per day of VOC;
    - (III) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this regulation shall:
      - I. Provide a vapor balance system or equivalent control that is at least 90.0 percent effective in reducing emissions from truck or railcar deliveries to storage tanks with capacities greater than 2,000 gallons that store VOC with vapor pressure greater than 4.1 psi at 68 degrees F; and
      - II. Install pressure/vacuum conservative vents set on all storage tanks that store VOC with vapor pressures greater than 1.5 psi at 68 degrees F unless a more effective control system is used.
  - (iii) The owner or operator of a synthesized pharmaceutical facility subject to this regulation shall include all centrifuges, rotary vacuum filters, and other filters having an exposed liquid surface, where the liquid contains VOC and exerts a total VOC vapor pressure of 0.5 psi or more at 68 degrees F.

- (iv) The owner or operator of a synthesized pharmaceutical facility subject to this regulation shall install covers on all in-process tanks containing a volatile organic compound at any time. These covers must remain closed, unless production, sampling, maintenance, or inspection procedures require operator access.
- (v) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this regulation shall repair all leaks from which liquid, containing VOC, can be observed running or dripping. The repair shall be completed the first time the equipment is off-line for a period of time long enough to complete the repair.

2. For the purpose of this regulation, the following definitions also apply:

- (i) "Condenser" means a device which cools a gas stream to a temperature which removes specific organic compounds by condensation;
- (ii) "Control system" means any number of control devices, including condensers, which are designed and operated to reduce the quantity of VOC emitted to the atmosphere;
- (iii) "Reactor" means a vat or vessel, which may be jacketed to permit temperature control, designed to contain chemical reactions;
- (iv) "Separation operation" means a process that separates a mixture of compounds and solvents into two or more components. Specific mechanisms include extraction, centrifugation, filtration, and crystallization;
- (v) "Synthesized pharmaceutical manufacturing" means manufacture of pharmaceutical products by chemical synthesis.
- (vi) "Production equipment exhaust system" means a device for collecting and directing out of the work area VOC fugitive emissions from reactor openings, centrifuge openings, and other vessel openings for the purpose of protecting workers from excessive VOC exposure.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF NOVEMBER 24, 1981

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(II) VOC Emissions from the Manufacture of Pneumatic Rubber Tires:

1. The owner or operator of an undertread cementing, tread end cementing, or bead dipping operation subject to this regulation shall:
  - (i) Install and operate a capture system, designed to achieve maximum reasonable capture from all undertread cementing, tread end cementing and bead dipping operation; and install and operate a control device that effects at least a 90.0 percent reduction efficiency, measured across the control system, and has been approved by the Director;
  - (ii) The owner or operator of an undertread cementing operation, tread and cementing operation or bead dipping operation may, in lieu of a vapor capture and control system for those operations, make process changes which reduces emissions to a level equal to or below that which would be achieved with emission controls as specified in subparagraph (i) above.
2. The owner or operator of a green tire spraying operation subject to this regulation shall:
  - (i) Substitute water-based sprays for the normal solvent based mold release compound; or
  - (ii) Comply with paragraph 1. of this regulation.
3. If the total volatile organic compound emissions from all undertreading cementing, tread end cementing, bead dipping and green tire spraying operations at a pneumatic rubber tire manufacturing facility do not exceed 57 grams per tire, paragraphs 1. and 2. above shall not apply.
4. For the purpose of this subsection the following definitions also apply:
  - (i) "Pneumatic rubber tire manufacturer" means the undertread cementing, tread end cementing, bead dipping, and green tirespraying associated with the production of pneumatic rubber, passenger type tires on a mass production basis.
  - (ii) "Passenger type tire" means agricultural, airplane, industrial, mobile home, light and medium duty truck, and passenger vehicle tires with a bead diameter up to but excluding 20.0 inches and cross section dimension up to 12.8 inches.
  - (iii) "Undertread cementing" means the application of a solvent based cement to the underside of a tire tread.
  - (iv) "Bead dipping" means the dipping of an assembled tire bead into a solvent based cement.
  - (v) "Tread end cementing" means the application of a solvent based cement to the tire tread ends.
  - (vi) "Green tires" means assembled tires before molding and curing have occurred.
  - (vii) "Green tire spraying" means the spraying of green tires, both inside and outside, with release compounds which help remove air from the tire during molding and prevent the tire from sticking to the mold after curing.
  - (viii) "Water based spray" means release compounds, sprayed on the inside and outside of green tires, in which solids, water, and emulsifiers have been substituted for organic solvents.

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(mm) VOC Emissions from Graphic Arts Systems:

1. No person shall cause, let, permit, suffer, or allow the operation of a packaging rotogravure, publication rotogravure or flexographic printing facility employing solvent containing ink unless:
  - (i) The volatile fraction of ink, as it is applied to the substrate, contains 25.0 percent by volume or less of organic solvent and 75.0 percent by volume or more nonvolatile material or non organic solvent (compliance may be demonstrated by averaging on a 24-hour weighted basis the volatile fraction of all machine-ready inks used on a single packaging rotogravure, publication rotogravure or flexographic printing line; averaging across lines is not allowed); or
  - (ii) The ink as it is applied to the substrate, less water, contains 60.0 percent by volume or more nonvolatile material (compliance may be demonstrated by averaging on a 24-hour weighted basis the non-volatile fraction of all machine ready inks, less water, used on a single packaging rotogravure, publication rotogravure or flexographic printing line; averaging across lines is not allowed); or
  - (iii) The owner or operator installs and operates volatile organic compound emission reduction equipment approved by the Director to have at least 90.0 percent reduction efficiency, measured across the control equipment together with an adequate capture system.
2. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Packaging rotogravure printing" means rotogravure printing upon paper, paperboard, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into packaging products and labels for articles to be sold.
  - (ii) "Publishing rotogravure printing" means rotogravure printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.
  - (iii) "Flexographic printing" means the application of words, designs and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.
  - (iv) "Rotogravure printing" means the application of words, designs and pictures to a substrate by means of a roll printing technique which involved an intaglio or recessed image areas in the form of cells.
  - (v) "Roll printing" means the application of words, designs and pictures to a substrate usually by means of a series of hard rubber or steel rolls each with only partial coverage.

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(nn) VOC Emissions from External Floating Roof Tanks:

1. No person shall cause, let, permit, suffer, or allow the storage of petroleum liquids in external floating roof tanks having capacities greater than 40,000 gallons unless:
  - (i) The vessel has been fitted with:
    - (I) A continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or
    - (II) A closure or other device which controls VOC emissions with an effectiveness equal to or greater than a seal required under part (a)1.(i) of this section and approved by the Director.
  - (ii) All seal closure devices meet the following requirements:
    - (I) There are no visible holes, tears, or other openings in the seal(s) or seal fabric;
    - (II) The seal(s) are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall; and
    - (III) For vapor mounted primary seals, the accumulated area of gaps exceeding 1/8 inch in width between the secondary seal and the tank wall shall not exceed 1.0 inch<sup>2</sup> per foot of tank diameter.
  - (iii) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves are:
    - (I) Equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and
    - (II) Equipped with projections into the tank which remain below the liquid surface at all times.
  - (iv) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;
  - (v) Rim vents are set to open when the roof is being floated off leg supports or at the manufacturer's recommended setting; and
  - (vi) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least 90 percent of the opening.
2. The owner or operator of a petroleum liquid storage vessel with an external floating roof subject to this regulation shall:
  - (i) Perform routine inspections semi-annually in order to insure compliance with paragraph 1. of this subsection and the inspections shall include a visual inspection of the secondary seal gap;
  - (ii) Measure the secondary seal gap annually when the floating roof is equipped with a vapor-mounted primary seal; and
  - (iii) Maintain records of the types of volatile petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of the inspections performed in subparagraphs 2.(i) and (ii).
3. Copies of all records under paragraph 2. of this subsection shall be retained by the owner or operator for a minimum of two years after the date on which the record was made.

4. Copies of all records under this section shall immediately be made available to the Director, upon verbal or written request, at any reasonable time.
5. The Director may, upon written notice, require more frequent inspections or modify the monitoring and record keeping requirements, when necessary to accomplish the purposes of this regulation.
6. The regulation does not apply to petroleum liquid storage vessels which:
  - (i) Are used to store waxy, heavy pour crude oil;
  - (ii) Have capacities less than 420,000 gallons and are used to store produced crude oil and condensate prior to lease custody transfer;
  - (iii) Contain a petroleum liquid with a true vapor pressure of less than 1.5 psia;
  - (iv) Contain a petroleum liquid with a true vapor pressure of less than 4.0 psia; and
    - (I) Are of welded construction; and
    - (II) Presently possess a metallic-type shoe seal, a liquid mounted foam seal, a liquid-mounted liquid filled type seal, or other closure device of demonstrated equivalence approved by the Director; or
    - (III) Are of welded construction, equipped with a metallic-type shoe primary seal and has a secondary seal from the top of the shoe to the tank wall (shoe-mounted secondary seal).
7. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Condensate" means hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.
  - (ii) "Crude oil" means a naturally occurring mixture which consists of hydrocarbon and sulfur, nitrogen and/or oxygen derivatives of hydrocarbons which is a liquid at standard conditions.
  - (iii) "Lease custody transfer" means the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.
  - (iv) "External floating roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank wall.
  - (v) "Liquid-mounted seal" means a primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof around the circumference of the tank.
  - (vi) "Petroleum liquids" means crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.
  - (vii) "Vapor-mounted seal" means a primary seal mounted so there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.
  - (viii) "Waxy, heavy pour crude oil" means a crude oil with a pour point of 50 degrees F or higher as determined by the American Society for Testing and Materials Standards D97-66, "Test for Pour Point of Petroleum Oils."



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THIS IS THE FEDERALLY APPROVED REGULATION AS OF NOVEMBER 24, 1981

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	DEC 18, 1980	NOV 24, 1981	46 FR 57486

(oo) Fiberglass Insulation Manufacturing Plants:

1. No person shall cause, let, suffer, permit, or allow the emission of particulate matter from any fiberglass insulation production line to exceed a concentration of 0.04 grains per standard dry cubic foot.
2. For the purpose of this subsection, "Fiberglass insulation production line" means any combination of equipment, devices or contrivances for the manufacture of fiberglass insulation. This does not include glass melting furnaces, equipment associated with the process which is defined herein a "Fuel-burning Equipment," equipment the primary purpose of which involves the handling, storing or packaging of the fiberglass insulation or equipment the primary purpose of which involves the handling, storing or conveying of raw products for input into the glass melting furnace.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF NOVEMBER 24, 1981

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	DEC 18, 1980	NOV 24, 1981	46 FR 57486

(pp) Bulk Gasoline Plants:

1. After July 1, 1991, no owner or operator of a bulk gasoline plant may permit the receiving or dispensing of gasoline by its stationary storage tanks unless:
  - (i) Each tank is equipped with a submerged fill pipe, approved by the Director; or
  - (ii) Each tank is equipped with a fill line whose discharge opening is at the tank bottom;
  - (iii) Each tank has a vapor balance system consisting of the following major components:
    - (I) A vapor space connection on the stationary storage tank equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of gasoline or gasoline vapors; and
    - (II) A connecting pipe or hose equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of gasoline or gasoline vapors.
2. After July 1, 1991, no owner or operator of a bulk gasoline plant, or the owner or operator of a tank truck or trailer may permit the transfer of gasoline between the tank truck or trailer and stationary storage tank unless:
  - (i) The vapor balance system is in good working order and is connected and operating; and
  - (ii) The gasoline transport vehicle is maintained to prevent the escape of fugitive vapors and gases during loading operations; and
  - (iii) A means is provided to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected; and
  - (iv) The pressure relief valves on storage vessels and tank trucks or trailers are set to release at 0.7 psia or greater unless restricted by state or local fire codes or the National Fire Prevention Association guidelines in which case the pressure relief valve must be set to release at the highest possible pressure allowed by these codes or guidelines.
3. The requirements of this subsection shall not apply to stationary storage tanks of less than 2,000 gallons:
4. Sources and persons affected under this subsection shall comply with the vapor collection and control system requirements of Rule 391-3-1-.02(2)(ss).
5. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Bottom filling" means the filling of a tank truck or stationary storage tank through an opening that is located at the tank bottom.
  - (ii) "Bulk gasoline plant" means a gasoline storage and distribution facility with an average daily throughput of more than 4,000 gallons but less than 20,000 gallons which receives gasoline from bulk terminals by rail and/or trailer transport, stores it in tanks, and subsequently dispenses it via account trucks to local farms, businesses, and service stations;
  - (iii) "Bulk gasoline terminal" means a gasoline storage facility which receives gasoline from refineries primarily by pipeline, ship, or barge, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by tank truck and has an average daily throughput of more than 20,000 gallons of gasoline.

- (iv) "Gasoline" means any petroleum distillate having a Reid vapor pressure of 4.0 psia or greater.
  - (v) "Submerged filling" means the filling of a tank truck or stationary tank through a pipe or hose whose discharge opening is not more than six inches from the tank bottom.
  - (vi) "Vapor balance system" means a combination of pipes or hoses which create a closed system between the vapor spaces of an unloading tank and a receiving tank such that vapor spaces displaced from the receiving tank are transferred to the tank being unloaded.
6. The requirements contained in this subsection shall apply to all bulk gasoline plants located in those counties of Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, Paulding and Rockdale.
7. For the purposes of this subsection "Stationary Storage Tank" means all underground vessels and any aboveground vessels never intended for mobile use.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF OCTOBER 13, 1992

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 03, 1991	OCT 13, 1992	57 FR 46780
	APR 03, 1991	OCT 13, 1992	57 FR 46780

(qq) VOC Emissions from Large Petroleum Dry Cleaners:

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from a large petroleum dry cleaner facility to exceed 3.5 pounds per 100 pounds dry weight of articles dry cleaned.
2. The VOC content in all filtration waste shall be reduced to one pound or less per hundred pounds dry weight of articles dry cleaned before disposal and exposure to the atmosphere from a petroleum solvent filtration system; or
3. Install and operate a cartridge filtration system and drain the filter cartridges in the sealed housing for eight hours or more before their removal.
4. Each owner or operator of a large petroleum dry cleaner shall inspect all equipment for leaks every 15 days and repair all petroleum solvent vapor and liquid leaks within three working days after identifying the source of the leaks.
5. Each owner or operator of a large petroleum dry cleaners shall maintain sufficient records to demonstrate compliance and provide them to the Division upon request, for a period of two years.
6. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Cartridge filter" means perforated canisters containing filtration paper and activated carbon that are used in the pressurized system to remove solid particles and fugitive dyes from soil-laden solvents.
  - (ii) "Large petroleum dry cleaner" means any facility engaged in the process of the cleaning of textile and fabric products in which articles are washed in a nonaqueous solution (solvent), then dried by exposure to a heated air stream and consumes 25 tons or more of petroleum solvent annually.
  - (iii) "Solvent recovery dryer" means a class of dry cleaning dryers that employs a condenser to liquefy and recover solvent vapors evaporated in a closed loop recirculating stream of heated air.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF OCTOBER 13, 1992

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 03, 1991	OCT 13, 1992	57 FR 46780
	APR 03, 1991	OCT 13, 1992	57 FR 46780

(rr) Gasoline Dispensing Facility - Stage I.

1. After the compliance date specified in paragraph 2. of this subsection, no person may transfer or cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank subject to this subsection, unless:
  - (i) The tank is equipped with all of the following:
    - (I) A submerged fill pipe; and
    - (II) A Division approved Stage I vapor recovery system that shall remain in good working condition, such as keeping the vapor return opening free of liquid or solid obstructions, and that also shall be leak tight as determined by tests conducted in accordance with test procedures as approved by the Division; and
    - (III) Vents that shall be at least 12 feet in height from the ground and shall have a Pressure/Vacuum vent valve with minimum settings of 8 ounces of pressure and 1/2 ounce of vacuum unless the facility has a CARB certified Stage II vapor recovery system where the CARB executive order explicitly states the settings for the vent valve; and
  - (ii) The vapors displaced from the storage tank during filling are controlled by one of the following:
    - (I) A vapor-tight vapor return line from the stationary gasoline storage tank(s) to the delivery vessel for each product delivery line that is connected from the delivery vessel to the storage tank(s) and a system that will ensure the vapor line(s) is connected before gasoline can be transferred into the tank(s); or
    - (II) If a manifold connects all stationary gasoline storage tanks vent lines, a vapor tight vapor return line from a tank being filled to the delivery vessel with sufficient return capacity to control vapors from all tanks being filled at the time and to prevent release of said vapors from the vent line(s) or other tank openings; or
    - (III) A refrigeration-condensation system or a carbon adsorption system is utilized and recovers at least 90 percent by weight of the organic compounds in the displaced vapor.
2. Compliance Dates.
  - (i) All gasoline dispensing facilities located in Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, Paulding and Rockdale counties shall be in compliance.
  - (ii) All gasoline dispensing facilities located in Cherokee and Forsyth counties shall be in compliance with this subsection by November 15, 1994.
  - (iii) All gasoline dispensing facilities located in Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale counties shall be in compliance with Chapter 391-3-1-.02(2)(rr)1.(i) and (ii) by April 1, 1995.
3. For the purpose of this subsection, the following definitions shall apply:

- (i) "Gasoline" means a petroleum distillate having a Reid vapor pressure of 4.0 psia or greater.
  - (ii) "Delivery vessel" means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities.
  - (iii) "Submerged fill pipe" means any fill pipe with a discharge opening which is within a nominal distance of 6 inches from the tank bottom.
  - (iv) "Gasoline dispensing facility" means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.
  - (v) "Stationary storage tank" means all underground vessels and any aboveground vessels never intended for mobile use.
  - (vi) "CARB" means the California Air Resources Board.
  - (vii) "Division approved" means any Stage I gasoline vapor recovery system properly certified under the CARB vapor recovery certification procedures effective on or before March 31, 2001, excepting the coaxial drop tube requirement exempted by paragraph 6., or any Stage I gasoline vapor recovery system properly certified under the CARB enhanced vapor recovery certification procedures effective April 1, 2001, or any Stage I gasoline vapor recovery system whose design has been submitted to the Division, has passed any required certification tests, and has received a written approval from the Division. The submitted design shall include but may not be limited to drawings detailing all components of the system and a written narrative describing the components and their use. Mixing of equipment components certified under separate CARB certification procedures will not be allowed.
- 4. The requirements contained in this subsection shall apply to all stationary storage tanks with capacities of 2,000 gallons or more which were in place before January 1, 1979, and stationary storage tanks with capacities of 250 gallons or more which were in place after December 31, 1978, located at gasoline dispensing facilities located in those counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale.
  - 5. The requirements of this subsection shall not apply to stationary storage tanks of less than 550 gallons capacity used exclusively for the fueling of implements of husbandry or to gasoline dispensing facilities that dispense no more than 10,000 gallons of gasoline per month, provided the tanks are equipped with submerged fill pipes.
  - 6. Stage I gasoline vapor recovery systems installed prior to January 1, 1993 that currently utilize a co-axial Stage I vapor recovery system in which the gasoline tanks are not manifolded in any manner and that are utilized at a facility that is not required to have a Stage II vapor recovery system shall be exempted from installing a co-axial poppetted drop tube.
  - 7. All Stage I vapor recovery systems at gasoline dispensing facilities shall be certified by the equipment owner as being properly installed and properly functioning. Certification testing shall be conducted by a qualified technician who has a thorough knowledge of the system. Tests shall be conducted in accordance with test procedures as approved by the Division. The fill cap and vapor cap must be removed when performing certification testing.
  - 8. Testing may be conducted by the Division or by an installation or testing company that meets the minimum criteria established by the Division for conducting such tests. In the case where a party other than the Division will be conducting the testing, the owner or operator shall notify the

Division at least five days in advance as to when the testing will occur and what party will conduct the testing.

9. Certification and recertification testing and compliance reporting.
  - (i) For those gasoline dispensing facilities subject to Chapter 391-3-1-.02(2)(zz) Gasoline Dispensing Facilities - Stage II, no additional certification or recertification testing or compliance reporting will be required under paragraph 7.
  - (ii) Certification and recertification testing and compliance reporting for all other Stage I systems shall be required according to the following schedule:
    - (I) Certification testing will be required on or before December 31, 2002 for all existing Stage I systems, or within 30 days of system installation for new systems.
    - (II) Recertification testing will be required every five years following the initial certification.
    - (III) Compliance reporting shall be required within 30 days of the certification or recertification test. This report shall be submitted to the Division and shall include results of either:
      - I. A vapor tightness test as required by the Division; or
      - II. A procedure or procedures equivalent to 1. above as approved by the Division.
10. Facilities equipped with Stage I vapor controls shall be subject to annual compliance inspections and functional testing by the Environmental Protection Division personnel which include but are not limited to the following:
  - (i) Verification that all equipment is present and maintains a certified system configuration.
  - (ii) Inspection of all Stage I related files to ensure that the facility has complied with maintenance requirements and other record keeping requirements such as inspection, compliance and volume reports.
  - (iii) Observation of the use of equipment by facility operators and product suppliers.
  - (iv) Verification that the facility has complied with the vapor recovery testing requirements.
11. The owner or operator shall maintain the Stage I vapor recovery system in proper operating condition as specified by the manufacturer and free of defects that could impair the effectiveness of the system. For the purposes of this paragraph, the following is a list of equipment defects in Stage I vapor recovery systems that substantially impair the effectiveness of the systems in reducing gasoline bulk transfer vapor emissions:
  - (i) Absence or disconnection of any component that is a part of the approved system;
  - (ii) Pressure/vacuum relief valves or dry breaks that are inoperative;
  - (iii) Any visible product leaks.



12. Upon identification of any of the defects as described above, the owner or operator shall immediately schedule and implement repair, replacement or adjustment by the company's repair representative as necessary.
13. The following records shall be maintained on-site for two years:
  - (i) Maintenance records including any repaired or replacement parts and a description of the problems.
  - (ii) Compliance records including warnings or notices of violation issued by the Division.
  - (iii) Gasoline throughput records which will allow the average monthly gasoline throughput rate to be continuously determined.
14. Record disposal may be approved by the Division upon a written request by the owner or operator of the facility. Approval may be granted on a case-by-case basis considering volume of records, number of times the records have been inspected by the Division; and the value of maintaining the records. In no case, shall the time be extended beyond the requirements of this subsection.

THIS IS THE FEDERALLY APPROVED REGULATION AS OF APRIL 26, 1999

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 03, 1991	OCT 13, 1992	57 FR 46780
	APR 03, 1991	OCT 13, 1992	57 FR 46780
1st Revision	JUN 17, 1996	APR 26, 1999	64 FR 20186
2nd Revision	DEC 28, 2001	JUL 11, 2002	67 FR 45909

(ss) Gasoline Transport Vehicles and Vapor Collection Systems.

1. After the compliance date specified in paragraph 3. of this subsection, no person shall cause, let, permit, suffer, or allow the loading or unloading of gasoline from a gasoline transport vehicle of any size capacity unless:
  - (i) The tank sustains a pressure change of not more than 3 inches of water in 5 minutes when pressurized to 18 inches of water and evacuated to 6 inches of water as tested at least once per year in accordance with test procedures specified by the Division; and
  - (ii) Displays a marking on the right front (passenger) side of the tank, in characters at least 2 inches high, which reads either P/V TEST DATE or EPA27 and the date on which the gasoline transport tank was last tested; and
  - (iii) The tank has no visible liquid leaks and no gasoline vapor leaks as measured by a combustible gas detector; and
  - (iv) The owner or operator of the gasoline transport vehicle has submitted to the Division within 30 days of the test date a data sheet in the format specified by the Division containing at a minimum the following information: name of person(s) or company that conducted the test, date of test, test results including a list of any repairs made to the transport vehicle to bring it into compliance and the manufacturer's vehicle identification number (VIN) of the tank truck or frame number of a trailer-mounted tank; and
  - (v) The transport vehicle has been equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of gasoline or gasoline vapors, with a vapor return line and hatch seal designed to prevent the escape of gasoline or gasoline vapors while loading.
2. The owner or operator of a vapor collection or control system shall:
  - (i) Design and operate the vapor collection and control system and the gasoline loading equipment in a manner that prevents:
    - (I) Gauge pressure from exceeding 18 inches of water and vacuum from exceeding 6 inches of water in the gasoline tank truck;
    - (II) A reading equal to or greater than 100 percent of the lower explosive limit (LEL, measured as propane) at 1 inch from all points on the perimeter of a potential leak source when measured (in accordance with test procedures specified by the Division) during loading or unloading operations at gasoline dispensing facilities, bulk gasoline plants and bulk gasoline terminals;
    - (III) Avoidable visible liquid leaks during loading and unloading operations at gasoline dispensing facilities, bulk gasoline plants and bulk gasoline terminals; and
  - (ii) Within 15 days, repair and retest a vapor collection or control system that exceeds the limits in (i) above.

3. Compliance Dates.
  - (i) All gasoline transport vehicles and vapor collection systems located in Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, Paulding and Rockdale counties shall be in compliance.
  - (ii) All gasoline transport vehicles and vapor collection systems located in Cherokee and Forsyth counties shall be in compliance with this subsection by November 15, 1994.
4. The Division may require a pressure/vacuum retest or leak check for any transport vehicle or vapor collection or control system subject to this subsection.
  - (i) A transport vehicle or vapor collection or control system for which the Division has required a pressure/vacuum retest or leak check shall:
    - (I) Cease loading and unloading operations within fourteen (14) days of the date of the initial retest or leak check request unless the retest or leak check has been completed to the satisfaction of the Division; and
    - (II) Provide written advance notification to the Division of the scheduled time and place of the test in order to provide the Division an opportunity to have an observer present; and
    - (III) Supply a copy of the results of all such tests to the Division within 30 days of the test date.
5. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Combustible Gas Detector" means a portable VOC gas analyzer with a minimum range of 0-100 percent of the LEL as propane.
  - (ii) "Gasoline Transport Vehicle" means any mobile storage vessel including tank trucks and trailers used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities, bulk gasoline plants or bulk gasoline terminals.
  - (iii) "Gasoline Vapor Leak" means a reading of 100 percent or greater of the Lower Explosive Limit (LEL) of gasoline when measured as propane at a distance of one inch.
  - (iv) "Vapor Collection System" means a vapor transport system, including any piping, hoses and devices, which uses direct displacement by the gasoline being transferred to force vapors from the vessel being loaded into either a vessel being unloaded or vapor control system or vapor holding tank.
  - (v) "Vapor Control System" means a system, including any piping, hoses, equipment and devices, that is designed to control the release of volatile organic compounds displaced from a vessel during transfer of gasoline.
6. The requirements of this subsection shall apply only to those transport vehicles which load or unload gasoline at bulk gasoline terminals, bulk gasoline plants, and gasoline dispensing facilities subject to VOC vapor control requirements contained in other subsections of this Rule.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF OCTOBER 13, 1992

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 03, 1991	OCT 13, 1992	57 FR 46780
	APR 03, 1991	OCT 13, 1992	57 FR 46780
1st Revision	DEC 28, 2001	JUL 11, 2002	67 FR 45909

(tt) VOC Emissions from Major Sources

1. No person shall cause, let, permit, suffer or allow the emissions of VOC from any source to exceed the levels specified in paragraph 3. below unless such source has been approved by the Director as utilizing all reasonably available control technology in controlling those VOC emissions.
2. For the purpose of this subsection, "Reasonably Available Control Technology" means the utilization and/or implementation of water based or low solvent coatings, VOC control equipment such as incineration, carbon adsorption, refrigeration or other like means as determined by the Director to represent reasonably available control technology for the source category in question.
3. The requirements contained in this subsection shall apply to all such sources located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale which have potential VOC emissions exceeding 25 tons per year and to all such sources in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton which have potential VOC emissions exceeding 100 tons per year.
4. Compliance Dates.
  - (i) All sources of VOC emissions subject to this subsection and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale shall be in compliance.
  - (ii) All sources of VOC emissions subject to this subsection located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton and in operation on or before October 1, 1999, shall comply with the following compliance schedule:
    - (I) A demonstration of appropriate reasonably available control technology for controlling VOC emissions from the source must be submitted to the Division no later than October 1, 2000. Each demonstration is subject to approval, denial, or modification by the Division.
    - (II) A final control plan and application for a permit to construct for the installation of VOC emission control systems and/or modification of coatings, solvents, processes, or equipment must be submitted to the Division no later than April 1, 2001.
    - (III) On-site construction of emission control systems and/or modification of coatings, solvents, processes, or equipment must be completed by March 1, 2003.
    - (IV) Full compliance with the applicable requirements of this subsection must be demonstrated through methods and procedures approved by Division on or before May 1, 2003.
  - (iii) All sources of VOC emissions subject to this subsection located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton and which begin initial operation after October 1, 1999, shall be in compliance upon startup.

PRINTED May 28, 2003

5. For the purpose of determining applicability of this subsection, the emissions of VOC from any source shall exclude all VOC emissions subject to any other more specific VOC requirements contained in other subsections of this Rule.

THIS IS THE FEDERALLY APPROVED REGULATION AS OF JULY 10, 2001

		Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	OCT 28, 1999	JUL 10, 2001	66 FR 35906	
1st Revision	JAN 31, 2000	JUL 10, 2001	66 FR 35906	

(uu) Visibility Protection:

1. The Director shall provide written notice of any permit application or written advance notice of a permit application for a proposed major stationary source or major modification to an existing major stationary source of emissions from which may have an impact on visibility in a Class I area to the federal land manager and the federal official charged with direct responsibility for management of any land within any such area.
2. The Director shall provide such notice within 30 days after receiving an application or written advance notice from a source as described in paragraph 1. above. The notification of a permit application shall include an analysis of the proposed source's anticipated impact on visibility in any federal Class I area and all materials in the application. In addition, the Director shall provide the Federal Land Manager a 60-day notice of any public hearing on that permit application.
3. The Director shall consider any analysis performed and/or written comments made by the federal land manager in any final determination regarding the issuance of the permit provided that such analysis and/or comments are received within 30 days of having been notified by the Division. Where such analysis does not demonstrate to the satisfaction of the Director that an adverse impact will occur, the Director shall explain his decision and give notice of where the explanation can be obtained.
4. The provisions of this paragraph shall apply regardless of whether the proposed facility is to be located in an attainment, unclassified or nonattainment area.
5. The Director may require the source to monitor visibility in any Class I federal area near the proposed new stationary source or major modification for such purposes and by such means as the Director deems necessary and appropriate.
6. For the purpose of this paragraph, major stationary source or major modification to an existing source shall be defined as in 40 CFR 51.24, but only for the pollutants of particulate matter, sulfur dioxide and nitrogen oxides.
7. Prior to the issuance of any permit, the Director shall ensure that the source's emissions will be consistent with making reasonable progress towards the national visibility goal of preventing any future, and remedying any existing, impairment of visibility in mandatory Class I areas which impairment results from manmade air pollution. The Director may take into account the cost of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the useful life of the source.
8. For the purpose of this paragraph, "impact on visibility" means visibility impairment (reductions in visual range and atmospheric discoloration) which interferes with the management, protection, preservation or enjoyment of the visitor's visual experience of the federal Class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of visibility impairment, and must have these factors correlate with:
  - (i) Times of visitor use of the federal Class I area; and
  - (ii) The frequency and timing of natural conditions that reduce visibility.

PRINTED May 28, 2003

THIS IS THE FEDERALLY APPROVED REGULATION AS OF JANUARY 28, 1986

		Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842	
1st Revision:	DEC 16, 1975	AUG 20, 1976	41 FR 35184	
2nd Revision:	MAY 22, 1985	JAN 28, 1986	51 FR 3466	
	OCT 31, 1985	JAN 28, 1986	51 FR 3466	



(vv) Volatile Organic Liquid Handling and Storage

1. After the compliance date specified in section 3. of this subsection, no person subject to other VOC requirements contained in other subsections of this Rule may transfer or cause or allow the transfer of any volatile organic liquid other than gasoline from any delivery vessel into a stationary storage tank of greater than 4,000 gallons, unless the tank is equipped with submerged fill pipes.
2. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Delivery Vessel" means any tank truck or trailer equipped with a storage tank in use for the transport of volatile organic liquids from sources of supply to stationary storage tanks; and
  - (ii) "Submerged Fill Pipe" means any fill pipe with a discharge opening which is within six inches of the tank bottom.
3. Compliance Dates.
  - (i) All volatile organic liquid handling and storage facilities located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale shall be in compliance.
  - (ii) All volatile organic liquid handling and storage facilities subject to this subsection; located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and in operation on or before October 1, 1999, shall be in compliance by May 1, 2003.
  - (iii) All volatile organic liquid handling and storage facilities subject to this subsection; located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and which begin initial operation after October 1, 1999, shall be in compliance upon startup.

THIS IS THE FEDERALLY APPROVED REGULATION AS OF JULY 10, 2001

	Date Submitted to EPA	Date Approved by EPA	Federal Register
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1st Revision	JAN 31, 2000	JUL 10, 2001	66 FR 35906

PRINTED May 28, 2003

(ww) Perchloroethylene Dry Cleaners:

Repealed

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF JUNE 27, 1996

	Date Submitted to EPA	Date Approved by EPA	Federal Register
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	APR 03, 1991	OCT 13, 1992	57 FR 46780
1st Revision: (Repealed)	NOV 15, 1994	JUN 27, 1996	61 FR 33372

(yy) Emissions of Nitrogen Oxides from Major Sources

1. No person shall cause, let, permit, suffer or allow the emissions of nitrogen oxides from any source to exceed the levels specified in paragraph 2 below unless such source has been approved by the Director as meeting the appropriate requirement for all reasonably available control technology in controlling those emissions of nitrogen oxides.
2. The requirements contained in this subsection shall apply to all such sources located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale which have potential emissions of nitrogen oxides, expressed as nitrogen dioxide, exceeding 50 tons per year and to all such sources in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton which have potential emissions of nitrogen oxides, expressed as nitrogen dioxide, exceeding 100 tons per year.
3. Compliance Dates.
  - (i) All sources of nitrogen oxides emissions subject to this subsection and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale shall be in compliance.
  - (ii) All sources of nitrogen oxides emissions subject to this subsection located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton and in operation on or before October 1, 1999, shall comply with the following compliance schedule:
    - (I) A demonstration of appropriate reasonably available control technology for controlling emissions of nitrogen oxides from the source must be submitted to the Division no later than October 1, 2000. Each demonstration is subject to approval, denial, or modification by the Division.
    - (II) A final control plan and application for a permit to construct for the installation of nitrogen oxides emission control systems and/or modifications of process or fuel-burning equipment must be submitted to the Division no later than April 1, 2001.
    - (III) On-site construction of emission control systems and/or modification of process or fuel-burning equipment must be completed by March 1, 2003.
    - (IV) Full compliance with the applicable requirements of this subsection must be demonstrated through methods and procedures approved by Division on or before May 1, 2003.
  - (iii) All sources of nitrogen oxides emissions subject to this subsection located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton and which begin initial operation after October 1, 1999, shall be in compliance.
4. The requirements contained in this subsection shall not apply to individual equipment at the source which have potential emissions of nitrogen oxides, expressed as nitrogen dioxide, in quantities less than a de minimis level of one ton per year or to air pollution control devices which are installed to effect compliance with any requirement of this Chapter.
5. The requirements contained in this subsection shall not apply to individual equipment at the source which are subject to subsections (jjj), (lll), (mmm), or (nnn) of this section 391-3-1-.02(2).
6. For the purpose of determining applicability of this subsection, the emissions of nitrogen oxides from any source shall exclude all nitrogen oxides emissions subject to subsections (jjj), (lll), (mmm), or (nnn) of this section 391-3-1-.02(2).

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF JULY 10, 2001

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	OCT 28, 1999	JUL 10, 2001	66 FR 35906
1st Revision	JAN 31, 2000	JUL 10, 2001	66 FR 35906

(zz) Gasoline Dispensing Facilities--Stage II:

1. After January 1, 1993, no person may construct or reconstruct a gasoline dispensing facility unless the gasoline dispensing facility is equipped and operating with a vapor recovery system to recover the displacement vapors from the vehicle's gasoline storage tank.
2. The requirements of this subsection shall not apply to facilities used exclusively for the fueling of implements of husbandry or individual dispensers used exclusively for the refueling of vehicles equipped with onboard refueling vapor recovery (ORVR) equipment. Furthermore, the gasoline volume dispensed into vehicles equipped with ORVR shall not be considered in any determination of applicability of this subsection.
3. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Approved Stage II vapor recovery system" means a Stage II vapor recovery system that has demonstrated 95 percent by weight or greater VOC control efficiency by:
    - (I) Stage II gasoline vapor recovery system properly certified under the CARB vapor recovery certification procedures effective on or before March 31, 2001, or a Stage II gasoline vapor recovery system properly certified under the CARB enhanced vapor recovery certification procedures effective April 1, 2001; mixing of equipment components certified under separate CARB certification procedures will not be allowed; or
    - (II) Tested and approved by the Department using appropriate CARB test procedures and methods; or equivalent test procedures and methods approved by the Environmental Protection Division and EPA, and conducted by the Division or by a third party approved by the Division.
  - (ii) "Average monthly throughput rate" means the average of the gallons pumped monthly for the most recent two year period of operation excluding any inactive period. If a facility has not been in operation for two years or does not have access to records for the most recent two years of operation, the Division shall determine the length of time to determine the average of the gallons pumped monthly.
  - (iii) "CARB" means the California Air Resources Board, Sacramento, CA 96812.
  - (iv) "Division" means the Environmental Protection Division of the Georgia Department of Natural Resources.
  - (v) "Fill Cap" means a cap that fits over the stationary gasoline storage tank riser which contains the submerged fill pipe and that is used to prevent contaminants from entering the tank and as a secondary measure to prevent the release of gasoline vapors.
  - (vi) "Gasoline" means a petroleum distillate having a Reid vapor pressure of 4.0 psia or greater.
  - (vii) "Gasoline Dispensing Facility" means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.
  - (viii) "Independent small business marketer of gasoline" means an owner engaged in the marketing of gasoline who receives more than 50 percent of his annual income from refining or marketing of gasoline, unless such a person:
    - (I) Is a refiner; or

- (II) Controls, is controlled by, or is under common control with, a refiner; or
  - (III) Is otherwise directly or indirectly affiliated with a refiner or with a person who controls, is controlled by, or is under common control with a refiner, unless the sole affiliation referred to herein is by means of a supply contract or an agreement or contract to use a trademark, trade name, service mark, or other identifying symbol or name owned by such refiner or any such person.
  - (ix) "Operator" means any person who operates a facility utilizing gasoline dispensing equipment and receives income from sale of gasoline at such facility.
  - (x) "Owner" means the person who owns the gasoline dispensing equipment which transfers gasoline from a stationary gasoline storage tank, which shall include but not be limited to the gasoline dispensers, hoses, nozzles, breakaways, and vapor piping.
  - (xi) "Reconstruction" means the replacement of any stationary gasoline storage tank.
  - (xii) "Refiner" means a person engaged in producing gasoline, kerosene, distillate fuel oils, lubricants, or other products through distillation of petroleum or through the redistillation, cracking, or reforming of unfinished petroleum derivatives, and whose total refinery capacity (including the refinery capacity of any person who controls, is controlled by, or is under common control with, such refiner) is 65,000 barrels per day or greater.
  - (xiii) "Stage II controls" means a gasoline vapor recovery system which recovers vapors during the refueling of motor vehicles.
  - (xiv) "Vapor cap" means the cap that fits over the stationary gasoline storage tank riser which carries vapors from the storage tank to the delivery vessels during the transfer of gasoline in two-point Stage I vapor recovery systems and that is used to prevent contaminants from entering the storage tank and as a secondary measure to prevent the loss of gasoline vapors.
4. Once a gasoline dispensing facility becomes subject to this rule, it will continue to be subject even if the gasoline throughput rate falls below the applicability threshold.
  5. After the compliance date specified in paragraph 7. of this subsection, no person may transfer or cause or allow the transfer of gasoline from stationary storage tanks at gasoline dispensing facilities subject to regulation under 391-3-1-.02(2)(zz) to any vehicle gasoline tank unless the gasoline dispensing facility is equipped with an approved vapor recovery system to recover the displaced vapors from the vehicle's gasoline tank.
  6. The requirements contained in this subsection shall apply to all gasoline dispensing facilities located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale.
  7. The compliance date for existing gasoline dispensing facilities required to install Stage II controls shall be as follows:
    - (i) Facilities which began construction or reconstruction after November 15, 1990, must comply by no later than May 15, 1993.
    - (ii) Facilities constructed before November 15, 1990, which are not owned by independent small business marketers and which have an average monthly throughput rate of 100,000 gallons or more of gasoline per month, must comply no later than November 15, 1993.
    - (iii) Facilities constructed before November 15, 1990, which are not owned by independent small business marketers and which have an average monthly throughput rate between

10,000 and 100,000 gallons per month, must comply by no later than November 15, 1994.

- (iv) Multiple facilities owned by a single independent small business marketers and which have an average monthly throughput rate of more than 50,000 gallons of gasoline per month, the following schedule applies:

- (I) no less than 33 percent of such facilities must comply by no later than November 15, 1993.
- (II) no less than 66 percent of such facilities must comply by no later than November 15, 1994.
- (III) all or 100 percent of such facilities must comply by no later than November 15, 1995.

- (v) A single facility owned by a single independent small business marketer of gasoline and which has an average monthly volume throughput rate of more than 50,000 gallons of gasoline per month, must comply no later than November 15, 1994.

8. The following facilities are exempted from Stage II requirements:

- (i) All gasoline dispensing facilities that dispense no more than 10,000 gallons of gasoline per month.
- (ii) Any gasoline dispensing facility constructed or reconstructed prior to November 15, 1995 that dispenses up to and including 50,000 gallons and less per month and is owned by an independent small business marketer of gasoline.

9. Stage II vapor recovery systems at each gasoline dispensing facility shall be certified as being properly installed and properly functioning. Certification, compliance testing, and recertification shall be made by a trained, qualified technician who has a thorough knowledge of the system. Tests shall be conducted in accordance with test procedures as approved by the Division. The fill cap and vapor cap must be removed when performing any test to determine vapor tightness for a vapor recovery system for certification, compliance testing, or recertification purposes.

10. Stage II vapor recovery systems at each gasoline dispensing facility shall be certified as being properly installed and properly functioning. Certification, compliance testing, and recertification shall be made by a trained, qualified technician who has a thorough knowledge of the system. Tests shall be conducted in accordance with test procedures as approved by the Division. The fill cap and vapor cap must be removed when performing any test to determine vapor tightness for a vapor recovery system for certification, compliance testing, or recertification purposes.

11. Compliance reporting and recertification testing of the vapor recovery system shall be required according to the following schedule:

- (i) Compliance reporting shall be required within twelve months of the original certification test and annually thereafter. This report shall be submitted to the Division and shall include results of either:
  - (I) a vapor tightness test and other functional test(s) as required by the Division; or
  - (II) a procedure or procedures equivalent to (I) as approved by the Division.

- (ii) Recertification will be required every five years or upon major system modification or replacement. This recertification shall include a leak check test and other functional tests that are required by the Division. A major system modification is considered to be replacing, repairing or upgrading 75 percent or more of a facility's Stage II vapor recovery system. The percent measure is based on the cost of a total system replacement at the time of replacement, repair or upgrading.
12. Facilities equipped with Stage II vapor controls shall be subject to annual compliance inspections and functional testing by the Environmental Protection Division personnel which include but are not limited to the following:
- (i) Verification that all equipment is present and maintains a certified system configuration and is in proper working order.
  - (ii) Inspection of all Stage II related files to ensure that the facility has complied with maintenance requirements and other record keeping requirements such as inspection, compliance and volume reports.
  - (iii) Observation of the use of equipment by facility operators and the public. These inspections shall include dispensing units, processors and handling units and any other systems-related equipment such as Stage I equipment.
  - (iv) A functional test of the required shut off or flow prohibiting mechanisms.
  - (v) A dynamic Backpressure test (DBT); if applicable to the system.
  - (vi) Other compliance tests as deemed necessary by the Division.
  - (vii) Verification that the facility has complied with the Leak Test (LT) and the Liquid Blockage Test (LBT) requirements.
  - (viii) Inspection for labels, signs and/or other public information.
13. Each owner or operator shall ensure that at least one facility representative receives training and instruction in the operation and maintenance of the specific Stage II vapor recovery system in use at the facility. Such training shall be provided by the qualified instructor on the specific Stage II equipment. The trained facility representative shall instruct other appropriate facility employees as to the purpose and operating procedures of the system. Training shall include, but is not limited to, the following:
- (i) Purposes and effects of the Stage II vapor control program;
  - (ii) Equipment operation and function specific to the facility's system;
  - (iii) Maintenance schedules and requirements for the facility's equipment;
  - (iv) Equipment manufacturer contacts (names, addresses and phone numbers) for parts and service.
14. Each owner or operator shall post operating instructions conspicuously on the front of each gasoline dispenser using the Stage II vapor recovery system. These instructions shall, at a minimum, include:
- (i) A clear description of how to correctly dispense gasoline using the system;
  - (ii) A warning to not attempt continued refueling after automatic shutoff of the system (an indication that the vehicle fuel tank is full); and



- (iii) A telephone number to be used to report to the station owner or company repair representative any problems experienced with the system.
15. The owner or operator shall maintain the Stage II vapor recovery system in proper operating condition as specified by the manufacturer and free of defects that could impair the effectiveness of the system. For the purposes of this paragraph, the following is a list of equipment defects in Stage II vapor recovery systems that substantially impair the effectiveness of the systems in reducing refueling vapor emissions:
- (i) Absence or disconnection of any component that is a part of the approved system;
  - (ii) A vapor hose that is crimped or flattened such that the vapor passage is blocked, or the pressure drop through the vapor hose exceeds by a factor of 2 or more the value as certified in the approved system;
  - (iii) A nozzle boot that is torn in one or both of the following ways:
    - (A) A triangular-shaped or similar tear more than 1/2 inch on a side, or a hole more than 1/2 inch in diameter, or
    - (B) A slit more than 1 inch in length;
  - (iv) A faceplate or flexible cone on a balance nozzle or a nozzle in a vacuum assist type system, that is damaged such that the capability to achieve a seal with a fill pipe interface is affected for at least 1/4 of the circumference of the faceplate (accumulated);
  - (v) A nozzle shutoff mechanism that malfunctions in any manner;
  - (vi) Vapor return lines, including such components as swivels, anti-recirculating valves, and underground piping, that malfunction or are blocked, or are restricted such that the pressure drop through the line exceeds by a factor of 2 or more the value as certified in the approved system;
  - (vii) A vapor processing unit that is inoperative;
  - (viii) A vacuum producing device that is inoperative;
  - (ix) Pressure/vacuum relief valves, vapor check valves, or dry breaks that are inoperative;
  - (x) Any equipment defect that is identified by the Division as substantially impairing the effectiveness of the system in reducing refueling vapor emissions; or
  - (xi) Any leaks.
16. Upon identification of any of the defects as described above, the owner or operator shall tag "out-of-order" all dispensing equipment for which vapor recovery has been impaired. The tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defective equipment has been repaired, replaced, or adjusted as necessary. The Division shall be promptly notified by U.S. Mail as to the corrective actions taken by the company's repair representative with regards to major repairs. Hoses, nozzles, nozzle boots and other routine repairs are exempted from this notification.
17. The owner or operator shall inspect all nozzles and nozzle boots or faceplates on a daily basis.

18. Owners or operators of facilities subject to Stage II vapor control shall maintain, at the facility, any applicable permits or licenses to operate the facility or specific systems current at all times. All required records shall be made readily available for the Division's inspection. Certification and test results which verify that the Stage II vapor recovery system meets the requirements shall be maintained for five years.
19. The following records shall be maintained for two years:
  - (i) Maintenance records including any repaired or replacement parts and a description of the problems.
  - (ii) Compliance records including warning or notices of violation issued by the Division.
  - (iii) Gasoline throughput records which will allow the average monthly gasoline throughput rate to be continuously determined.
  - (iv) Inspection results including self-inspection weekly summaries.
  - (v) Records of operator employee training for current employees.
20. Record disposal may be approved by the Division upon a written request by the owner or operator of the facility. Approval may be granted on a case-by-case basis considering volume of records, number of times the records have been inspected by the Division; and the value of maintaining the records. In no case, shall the time be extended beyond the requirements of this subsection.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF APRIL 26, 1999

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	NOV 12, 1992	FEB 02, 1996	61 FR 3819
1st Revision	JUN 17, 1996	APR 26, 1999	64 FR 20186
2nd Revision	JAN 4, 2001	JUL 11, 2001	67 FR 45909
3rd Revision	DEC 28, 2001	JUL 11, 2001	67 FR 45909

(aaa) Consumer and Commercial Products.

1. This subsection is applicable to any person who supplies or sells consumer and commercial products limited by this subsection within Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, or Rockdale counties.
2. No person shall, after January 1, 1996, within the counties listed in paragraph 1, supply, offer for sell, or sell any automobile windshield washer fluids which contain VOC's as an active ingredient, or solvent in a concentration greater than 8.0% by weight.
3. Administrative Requirements
  - (i) Each container of any fluid subject to this subsection shall display the maximum VOC content of the fluids as a percent by weight. The VOC content displayed may be calculated using product formulation data, or may be determined using the test method specified in Section (3) "Sampling".
4. The requirements of this subsection do not apply to automobile windshield washer fluids manufactured for use outside of the counties listed in paragraph 1. or for shipment to other manufacturers for repackaging where the seller can provide documentation that the product is to be subsequently marketed outside of these counties or for supply in new vehicles for original sale.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF APRIL 26, 1999

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JUN 17, 1996	APR 26, 1999	64 FR 20186

(bbb) Gasoline Marketing.

1. General Requirements.

- (i) No person may produce, store, transport, supply, offer to supply, transfer or otherwise handle, sell, offer for sale, or dispense gasoline that does not meet the limits specified in this subsection when tested in accordance with the test methods specified in this subsection, unless the gasoline is segregated and clearly documented as not for sale or supply to an ultimate consumer in the following 25-counties: Barrow, Bartow, Butts, Carroll, Cherokee, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Hall, Haralson, Henry, Jackson, Newton, Paulding, Pickens, Rockdale, Spalding, and Walton.
- (ii) Gasoline which meets the limits specified in this subsection shall also be segregated and clearly documented as such.
- (iii) Effective April 1, 2003, the above requirements shall apply within an expanded area which includes the following additional 20 counties: Banks, Chattooga, Clarke, Floyd, Gordon, Heard, Jasper, Jones, Lamar, Lumpkin, Madison, Meriwether, Monroe, Morgan, Oconee, Pike, Polk, Putnam, Troup, and Upson.

2. Reid Vapor Pressure.

- (i) Effective June 1, 1999, during the period from June 1 to September 15 of any calendar year, the Reid vapor pressure of the gasoline shall not exceed 7.0 psi. The Reid vapor pressure of gasoline sampled from any downstream location shall not exceed 7.3 psi.
- (ii) An ethanol blend is considered in compliance if its measured Reid vapor pressure does not exceed 8.0 psi. This waiver is subject to the following conditions:
  - (I) Gasoline must contain denatured, anhydrous ethanol. The concentration of ethanol, excluding the required denaturing agent, must be at least 9 percent and no more than 10 percent (by volume) of the gasoline.
  - (II) Each invoice, loading ticket, bill of lading, delivery ticket and any other document that accompanies a shipment of gasoline containing ethanol shall contain a legible and conspicuous statement that the gasoline being shipped contains ethanol and the percentage concentration of ethanol.

3. Sulfur Content.

- (i) Effective April 1, 1999 and subsequent years through March 31, 2003, the sulfur content of all gasoline supplied by each producer or importer to comply with the Reid vapor pressure limits specified in paragraph 2 and designated for the counties listed in subparagraph 1.(i) shall not exceed a seasonal average of 150 ppm (by weight) and, effective April 1, 2001, a per-gallon cap of 500 ppm (by weight). For the control period within any individual calendar year, the sulfur content shall be averaged on a volume-weighted basis over the pool of gasoline supplied by the producer or importer in accordance with this subsection. The sulfur content of gasoline sampled at any downstream location shall not exceed 565 ppm (by weight).
- (ii) Effective April 1, 2003, the sulfur content of all gasoline supplied by each producer or importer and designated for the counties listed in subparagraphs 1.(i) and (iii) shall not exceed an annual average of 30 ppm (by weight) and a per-gallon cap of 150 ppm (by weight). For each calendar year, the sulfur content shall be averaged on a volume-weighted basis over the pool of gasoline supplied by the producer or importer in

accordance with this subsection during the subject calendar year. Effective June 1, 2003, the sulfur content of gasoline sampled at any downstream location, shall not exceed 175 ppm (by weight).

- (iii) Effective June 1, 2004, the sulfur content of all gasoline supplied by each producer or importer and designated for the counties listed in subparagraphs 1.(i) and (iii) shall not exceed a seasonal per-gallon cap of 80 ppm (by weight) for the period June 1 through September 15 of each calendar year. The sulfur content of gasoline sampled at any downstream location shall not exceed 95 ppm (by weight).

4. Reporting.

- (i) Effective April 1, 1999, the producer or importer shall submit documentation of the Reid vapor pressure and sulfur content of the first shipment of gasoline in each calendar year subject to the limits specified in this subsection and designated for the counties specified in subparagraph 1.(i). This documentation shall be submitted to the Division in the format specified by the Division within 30 days of the first shipment in each calendar year.
- (ii) Effective April 1, 2003, the producer or importer shall submit documentation of the Reid vapor pressure and sulfur content of the first shipment of gasoline in that calendar year subject to the limits specified in this subsection and designated for the counties specified in subparagraphs 1.(i) and (iii). This documentation shall be submitted to the Division in the format specified by the Division within 30 days of the first shipment.
- (iii) The producer, importer and carrier shall provide to the Division in the format specified by the Division an annual report summarizing any required records and/or test results pursuant to this subsection by November 30 of each year.
- (iv) Beginning April 1, 2003, the producer, importer and carrier shall provide to the Division in the format specified by the Division a quarterly report summarizing any required records and/or test results pursuant to this subsection within 60 days following the end of each calendar quarter. The producer, importer and carrier shall provide to the Division in the format specified by the Division an annual report summarizing any required records and/or test results pursuant to this subsection by March 1 following the end of each calendar year.
- (v) The producer, importer and carrier shall provide to the Division any records required to be maintained pursuant to this subsection within 10 business days of a written request from the Division.

5. Testing and Recordkeeping.

- (i) Producers.

- (I) Refinery-level Sampling and Testing.

Each producer shall sample and test for the Reid vapor pressure, and effective April 1, 1999, the sulfur content in each batch of gasoline that the producer has produced for the purpose of complying with this subsection, by collecting and analyzing a representative sample of gasoline taken from the batch at the refinery, using the methodologies specified in paragraph 6. A producer may choose to meet the testing requirements of this paragraph by utilizing the same samples and test results used for meeting the federal RFG and/or antidumping regulations. If a producer blends gasoline components directly to pipelines, storage tanks, tankships, railway tankcars

or trucks and trailers, the loading(s) shall be sampled and tested by the producer or authorized contractor. The producer shall maintain, for two years from the date of each sampling, records showing the sample date, the product sampled, the container or other vessel sampled, the volume of the shipment, results of any required testing, the name and address of the laboratory that performed the analysis, and the pool volume-weighted average for the respective calendar years of the components limited by this subsection.

(II) Terminal-level Sampling.

Effective May 1 of each calendar year beginning in 2001, the producer shall conduct volume-weighted, terminal-level sampling of gasoline received and intended for sale or supply during the control period in any of the applicable counties listed in subparagraph 1.(i) in calendar years 2001 through 2002 or 1.(i) and (iii) in 2003 and beyond. A composite sample will be obtained on every continuous movement of each distinct grade of low RVP/low sulfur gasoline at a pipeline breakout tankage. The composite sample will be obtained automatically with a non-pressurized automatic sampler, or manually through head-end, middle, and tail-end spot samples. Each distinct grade of low RVP/low sulfur gasoline will be composited separately. All samples thus taken shall be delivered to EPD or its designate for further testing and analysis.

(III) Notwithstanding the provisions of subparagraph (II) above, the producer is not required to provide terminal-level sampling if the Division provides notice that the Division's field testing from the previous calendar year indicates a seasonal arithmetic average sulfur content of 140 ppm or less for 2000 through 2002 and an annual arithmetic average sulfur content of 30 ppm or less in 2003 and beyond.

(ii) Importers.

(I) Refinery-level Testing.

Each importer shall provide test results for the Reid vapor pressure, and effective April 1, 1999, sulfur content of each batch aggregated in each shipment of gasoline that the importer intends to import or will import into the State of Georgia, by pipeline or other means, for the purpose of complying with this subsection, by ensuring that a representative sample of gasoline is taken from the batch at the refinery and analyzed, using the methodologies specified in paragraph 6. An importer may choose to meet the testing requirements of this paragraph by utilizing the same samples and test results used for meeting the federal RFG and/or antidumping regulations. If an importer blends gasoline components directly to pipelines, storage tanks, tankships, railway tankcars or trucks and trailers, the loading(s) shall be sampled and tested by the importer or authorized contractor. The importer shall maintain, for two years from the date of each sampling, records showing the sample date, the product sampled, the container or other vessel sampled, the volume of the shipment, results of any required testing, the name and the address of the laboratory that performed the analysis, final destination of the batch, and the pool volume-weighted average for the respective calendar years of the components limited by this subsection.

(II) Terminal-level Sampling.

Effective May 1 of each calendar year beginning in 2001, the importer shall conduct volume-weighted, terminal-level sampling of gasoline received and intended for sale or supply during the control period in any of the applicable counties listed in subparagraph 1.(i) in calendar years 2001 through 2002 or 1.(i) and (iii) in 2003 and beyond. A composite sample will be obtained on every continuous movement of each distinct grade of low RVP/low sulfur gasoline at a pipeline breakout tankage. The composite sample will be obtained automatically with a non-pressurized automatic sampler, or manually through head-end, middle, and tail-end spot samples. Each distinct grade of low RVP/low sulfur gasoline will be composited separately. All samples thus taken shall be delivered to EPD or its designate for further testing and analysis.

(III) Notwithstanding the provisions of subparagraph (II) above, the importer shall not provide terminal-level sampling if the Division provides notice that the Division's field testing from the previous calendar year indicates a seasonal arithmetic average sulfur content of 140 ppm or less for 2000 through 2002 and an annual arithmetic average sulfur content of 30 ppm or less in 2003 and beyond.

(iii) Carriers.

Each carrier shall maintain, for two years from the date of entry, records indicating the volume of each batch of transported gasoline, the producers and/or importers which contributed to each batch, date of receipt, identity of the destination, date of delivery to the destination, and recipient of each batch of gasoline delivered to any destination for distribution to any of the applicable counties specified in subparagraphs 1.(i) and (iii).

6. Test Methods.

(i) In determining compliance with the standards set forth in this subsection, the test methods presented in Table (bbb)1 shall be used. ASTM D-4057 or ASTM D-4177 shall be used for sampling of materials used in these tests. All identified test methods are incorporated and adopted herein by reference.

TABLE (bbb)1

Gasoline Specification	Test Method
Reid Vapor Pressure	ASTM D 5191*
Sulfur Content	ASTM D 2622 or ASTM D 5453

\* In lieu of equation 1 in section 13.2 of the test method, use the following:

$$RVPE, \text{ psi} = 0.956X - 0.347$$

where:

RVPE = equivalent Reid vapor pressure  
X = measured total vapor pressure in psi

(ii) Equivalent Test Methods.

Whenever this paragraph provides for a specified test method, another test method may be used following a determination by the Director that the other method produces results equivalent to the results with the specified method.

7. Definitions.

For the purpose of this subsection, the following terms have the meanings indicated unless otherwise specified.

- (i) "Carrier" means any distributor who transports or causes the transportation or storage of gasoline without taking title to or otherwise having any ownership of the gasoline, and without altering either the quality or quantity of the gasoline.
- (ii) "Ethanol blend" means gasoline which contains at least 9 percent and no more than 10 percent (by volume) ethanol, excluding denaturants.
- (iii) "Gasoline" means any fuel sold for use in spark ignition engines and which is commonly or commercially known or sold as gasoline, including oxygenated gasoline.
- (iv) "Importer" means any person who transports gasoline from another state or a foreign country into the state of Georgia.
- (v) "Producer" means any person who manufactures gasoline in Georgia.
- (vi) "Retailer" means a person operating an establishment at which motor fuel is sold or offered for sale to an ultimate consumer.
- (vii) "Ultimate consumer" means a person who purchases or obtains motor fuel for direct consumption in a motor vehicle and who does not transfer or offer to transfer the motor fuel to any other person following purchase or receipt.
- (viii) "Wholesale purchaser-consumer" means any organization that is an ultimate consumer of gasoline and which purchases or obtains gasoline from a supplier for use in motor vehicles and receives delivery of that product into a storage tank under the control of that organization

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF FEBRUARY 22, 2002.

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2nd Revision	OCT 28, 1999	FEB 22, 2002	67 FR 8200
3rd Revision	July 31, 2000	FEB 22, 2002	67 FR 8200
4th Revision	AUG 21, 2001	FEB 22, 2002	67 FR 8200



(ccc) VOC Emissions from Bulk Mixing Tanks:

1. After the compliance date specified in section 4. of this subsection, no person shall let, permit, suffer, or allow the operation of a mixing tank unless the following requirements for control of emissions of volatile organic compounds are satisfied:
  - (i) All portable and stationary mixing tanks used for the manufacture of any VOC containing material shall be equipped with covers which completely cover the tank except for an opening no larger than necessary to allow for safe clearance of the mixer shaft. The tank opening shall be covered at all times except when operator access is necessary.
  - (ii) Free fall of VOC containing material into product containers shall be accomplished by utilization of drop tubes, fill pipes or low-clearance equipment design on filling equipment unless demonstrated to the Division impractical for a specific operation.
  - (iii) Detergents or non-VOC containing cleaners shall be utilized for both general and routine cleaning operations of floors, equipment, and containers unless the cleanup cannot be accomplished without the use of VOC containing cleaners.
  - (iv) All waste solvents shall be stored in closed containers or vessels, unless demonstrated to be a safety hazard, and shall be disposed or reclaimed such solvents in a manner approved by the Division.
2. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Mixing Tanks" means any vessel in which resin, coating or other materials, or any combination thereof, are added to produce product blend.
3. The requirements of this subsection shall apply to facilities with potential VOC emissions exceeding 25 tons per year and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale and to facilities with potential VOC emissions exceeding 100 tons per year and located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton.
4. Compliance Dates.
  - (i) All sources subject to this subsection and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale shall be in compliance.
  - (ii) All sources subject to this subsection; located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and in operation on or before October 1, 1999, shall be in compliance by May 1, 2003.
  - (iii) All sources subject to this subsection; located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and which begin initial operation after October 1, 1999 shall be in compliance with this subsection upon startup.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF JULY 10, 2001

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2nd Revision	JAN 31, 2000	JUL 10, 2001	66 FR 35906

(ddd) VOC Emissions from Offset Lithography

1. After the compliance date specified in section 4. of this subsection, no person shall cause, let, permit, suffer, the operation of any offset lithography printing facility unless:
  - (i) Offset presses utilize fountain solutions containing 8 percent or less by volume VOCs; and
  - (ii) The owner or operator installs and operates a VOC emission reduction system for all heatset offset printing operations approved by the Director to have at least a 90 percent reduction efficiency and a capture system approved by the Director, or an equivalent VOC emission rate.
2. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Fountain Solution" means the mixture of water and additional ingredients such as etchant, gum arabic and dampening aid which coats the nonimage areas of the printing plate.
  - (ii) "Offset lithography printing" means the application of words, designs, and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is transferred from a roller chemically treated to accept ink in certain areas to a roller which then transfers the pattern to the substrate.
  - (iii) "Sheet-fed" refers to the process in which the substrate is cut into sheets before being printed.
  - (iv) "Web-fed" refers to the process in which the substrate is supplied to the press in the form of rolls.
3. The requirements of this subsection shall apply to facilities with VOC emissions exceeding 25 tons per year and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale and to facilities with potential VOC emissions exceeding 100 tons per year and located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton.
4. Compliance Dates.
  - (i) All sources subject to this subsection and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale shall be in compliance.
  - (ii) All sources subject to this subsection; located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and in operation on or before October 1, 1999, shall be in compliance with this subsection by May 1, 2003.
  - (iii) All sources subject to this subsection; located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and which begin initial operation after October 1, 1999, shall be in compliance with this subsection upon startup.

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(eee) VOC Emissions from Expanded Polystyrene Products Manufacturing:

1. Except as provided in sections 2., 3., and 4. of this section, after the compliance date specified in section 8. of this subsection, no person shall cause, let, permit, suffer, or allow the VOC emissions from an expandable polystyrene product manufacturing facility to exceed 0.015 lbs VOC/lb bead utilized.
2. No person shall cause, let, permit, suffer, or allow the operation of an expandable polystyrene cup manufacturing facility existing before November 1, 1987 unless the facility has installed and operates volatile organic compound emission reduction equipment on the pre-expanders having at least a 90.0 percent reduction efficiency and a capture system approved by the Director.
3. No person shall cause, let, permit, suffer, or allow the operation of an expandable polystyrene board insulation manufacturing facility existing before January 1, 1990 unless the facility has installed and operates volatile organic compound emission reduction equipment on the pre-expanders so as to achieve at least a 90.0 percent reduction efficiency and a capture system approved by the Director; or limits VOC emissions from the entire facility to no greater than 0.0175 lb VOC/lb bead utilized.
4. No person shall cause, let, permit, suffer, or allow the operation of an expandable polystyrene custom shape manufacturing facility existing before January 1, 1990 unless the facility utilizes a batch expander and reduced volatile expandable polystyrene bead containing no more than 4.5 percent initial VOC content. The monthly weighted average of all beads used shall not exceed 4.5 percent.
5. For the purposes of this subsection, VOC emitted after the average curing time shall not be considered to be emitted from the facility.
6. For the purpose of this subsection, the following definitions shall apply:
  - (i) "Expandable Polystyrene Products Manufacturing" means the manufacturing of products utilizing expandable polystyrene bead impregnated with a VOC blowing agent.
  - (ii) "Board Insulation Manufacturers" means producers of thermal insulation, display foam, or floatation products. Thermal insulation production usually requires densities as specified in ASTM C-578, the industry standard for both EPS and XPS insulation applications.
  - (iii) "Custom Shape Manufacturers" means producers of a variety of different products ranging in density and size and based primarily on customer specifications.
  - (iv) "Pre-expander" means the system where initial expansion of the bead occurs.
  - (v) "Process" means the point from the opening of the gaylord to the end of the average curing time.
7. The requirements of this subsection shall apply to facilities with potential VOC emissions exceeding 25 tons per year and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale and to facilities with potential VOC emissions exceeding 100 tons per year and located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton.

8. Compliance Dates.

- (i) All sources subject to this subsection and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale shall be in compliance.
- (ii) All sources subject to this subsection located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and in operation on or before October 1, 1999, shall be in compliance with this subsection by May 1, 2003.
- (iii) All sources subject to this subsection; located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and which begin initial operation after October 1, 1999, shall be in compliance with this subsection upon startup.

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(fff) Particulate Matter Emissions from Yarn Spinning Operations.

1. No person shall cause, let, permit, suffer or allow the rate of particulate matter emissions from a yarn spinning operation with process input rates up to and including 30 tons per hour to equal or exceed the allowable rate of emissions calculated from the following equation.

$$E = 4.1P^{0.67}$$

where:

E = allowable emission rate in pounds per hour;

P = process input weight of raw or partially processed fiber in tons per hour.

2. For the purpose of this subparagraph, the term process, as it applies to the yarn spinning operation, shall include all of the activities from bale delivery, bale stripping, carding, drawing, spinning, twisting, to and including winding, conducted at the facility.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF DECEMBER 2, 1999.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
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(hhh) Wood Furniture Finishing and Cleaning Operations.

1. Each owner or operator of a wood furniture finishing and cleaning operation shall limit VOC emissions from finishing operations by:
  - (i) Using topcoats that contain no more than 0.8 pounds of VOC per pound of solids, as applied; or
  - (ii) In lieu of complying with subsection (i), wood furniture finishing operations may comply by:
    - (I) Using a finishing system of sealers that contain no more than 1.9 pounds of VOC per pound of solids, as applied; and
    - (II) Using topcoats that contain no more than 1.8 pounds of VOC per pound of solids, as applied; or
  - (iii) For wood furniture finishing operations that use acid-cured alkyd amino vinyl sealers and that use acid-cured alkyd amino conversion varnish topcoats:
    - (I) Using sealers that contain no more than 2.3 pounds of VOC per pound of solids, as applied; and
    - (II) Using topcoats that contain no more than 2.0 pounds of VOC per pound of solids, as applied; or
  - (iv) For wood furniture finishing operations that do not use acid-cured alkyd amino vinyl sealers and that use acid-cured alkyd amino conversion varnish topcoats:
    - (I) Using sealers that contain no more than 1.9 pounds of VOC per pound of solids, as applied; and
    - (II) Using topcoats that contain no more than 2.0 pounds of VOC per pound of solids, as applied; or
  - (v) For wood furniture finishing operations that use acid-cured alkyd amino vinyl sealers and that do not use acid-cured alkyd amino conversion varnish topcoats:
    - (I) Using sealers that contain no more than 2.3 pounds of VOC per pound of solids, as applied; and
    - (II) Using topcoats that contain no more than 1.8 pounds of VOC per pound of solids, as applied; or
  - (vi) Using an averaging approach that demonstrates the wood furniture finishing operation meets the emission limits defined in subsections (i), (ii), (iii), (iv) or (v), averaged on a daily basis throughout the facility; or
  - (vii) Using a control system that will achieve an equivalent reduction in emissions and meet the requirements of subsections (i), (ii), (iii), (iv) or (v) of this section; or
  - (viii) Using a combination of the methods presented in subsections (i), (ii), (iii), (iv), (v), (vi), and (vii).



2. Each owner or operator of a wood furniture finishing and cleaning operation shall limit VOC emissions by using strippable booth coating materials that contain no more than 0.8 pounds of VOC per pound of solids, as applied.
3. Each owner or operator of a wood furniture finishing and cleaning operation shall prepare and maintain a written work practice implementation plan that defines work practices for each wood furniture manufacturing operation and addresses each of the topics specified. The work practice implementation plan shall be submitted to the Division for approval by the compliance dates contained in section 7. This plan shall include: an operator training course; a leak inspection and maintenance plan; a cleaning and washoff solvent accounting system; a spray booth cleaning plan; a storage plan for finishing, cleaning and washoff materials; an application equipment requirement plan; a paint line and gun cleaning plan; and an outline of washoff operations.
4. Each owner or operator of a wood furniture finishing and cleaning operation shall maintain certified product data sheets for each sealer, topcoat, and strippable booth coating material that is used to meet the requirements of sections 1. and 2. of this rule. If solvent or other VOC is added to the finishing material before application, the affected source shall maintain documentation showing the VOC content of the finishing material in pounds of VOC per pound of solids, as applied.
5. For the purpose of this subsection the following definitions shall apply:
  - (i) "As applied" means the VOC and solids content of the finishing material that is actually used for coating the substrate. It includes the contribution of materials used for in-house dilution of the finishing material.
  - (ii) "Certified product data sheet" means documentation furnished by a coating supplier or an outside laboratory that provides the VOC content by percent weight, the solids content by percent weight, and density of a finishing material, strippable booth coating, or solvent, measured using the EPA Method 24, or an equivalent or alternative method. The VOC content should represent the maximum VOC emission potential of the finishing material, strippable booth coating, or solvent.
  - (iii) "Sealer" means a finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. Washcoats, which are used in some finishing systems to optimize aesthetics, are not sealers.
  - (iv) "Stain" means any color coat having a solids content by weight of no more than 8.0 percent that is applied in single or multiple coats directly to the substrate. This includes, but is not limited to, nongraining stains, equalizer stains, sap stains, body stains, no-wipe stains, penetrating stains, and toners.
  - (v) "Strippable booth coating" means a coating that: (1) is applied to a booth wall to provide a protective film to receive overspray during finishing operations; (2) that is subsequently peeled off and disposed; and (3) by achieving (1) and (2), reduces or eliminates the need to use organic solvents to clean booth walls.
  - (vi) "Topcoat" means the last film-building finishing material applied in a finishing system. Non-permanent final finishes are not topcoats.
  - (vii) "Wood Furniture" means any product made of wood, a wood product such as rattan or wicker, or an engineered wood product such as particleboard that is manufactured under any of the following standard industrial classification codes: 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, 2599, or 5712.
6. The requirements of this subsection shall apply to facilities with potential VOC emissions exceeding 25 tons per year and located in the counties of Cherokee, Clayton, Cobb, Coweta,

DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale and to facilities with potential VOC emissions exceeding 100 tons per year and located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton.

7. Compliance Dates.

- (i) All sources subject to this subsection and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale shall be in compliance.
- (ii) All sources subject to this subsection; located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and in operation on or before October 1, 1999, shall be in compliance with this subsection by May 1, 2003.
- (iii) All sources subject to this subsection; located in the counties of Bartow, Carroll, Hall, Newton, Spalding, and Walton; and which begin initial operation after October 1, 1999, shall be in compliance with this subsection upon startup.

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(jjj) NO<sub>x</sub> Emissions from Electric Utility Steam Generating Units.

1. Effective May 1, 1999, no person shall cause, let, permit, suffer, or allow the emissions of NO<sub>x</sub> from an affected unit under this subsection unless:
  - (i) The NO<sub>x</sub> emissions from each affected unit(s) do not exceed the alternative emission limit established by the Director for the unit(s). Said alternative emission limits shall be determined by the Division and established in the Title V Permit for the affected unit(s). In no case shall the alternative emission limits established pursuant to this section, averaged over all affected units on a maximum rated heat input capacity basis, be greater than the average allowable rate specified in subsection 1.(ii).
  - (ii) If the person does not comply with all alternative emission limits established under subsection 1.(i) above, the person shall demonstrate that the NO<sub>x</sub> emissions, averaged over all affected units, do not exceed 0.34 lb/mm btu heat input.
2. Effective May 1, 2000, no person shall cause, let, permit, suffer, or allow the emissions of NO<sub>x</sub> from an affected unit under this subsection unless:
  - (i) The NO<sub>x</sub> emissions from each affected unit(s) do not exceed the alternative emission limit established by the Director for the unit(s). Said alternative emission limits shall be determined by the Division and established in the Title V Permit for the affected unit(s). In no case shall the alternative emission limits established pursuant to this section, averaged over all affected units on a maximum rated heat input capacity basis, be greater than the average allowable rate specified in subsection 2.(ii).
  - (ii) If the person does not comply with all alternative emission limits established under subsection 2.(i) above, the person shall demonstrate that the NO<sub>x</sub> emissions, averaged over all affected units, do not exceed 0.30 lb/mm btu heat input.
3. Effective May 1, 2003, no person shall cause, let, permit, suffer, or allow the emissions of NO<sub>x</sub> from an affected unit under this subsection unless:
  - (i) The NO<sub>x</sub> emissions from each affected unit(s) do not exceed the alternative emission limit established by the Director for the unit(s). Said alternative emission limits shall be determined by the Division and established in the Title V Permit for the affected unit(s). In no case shall the alternative emission limits established pursuant to this section, averaged over all affected units using the highest 30 consecutive days of actual heat input for 1999, be greater than the average allowable rate specified in subsection 3.(ii).
  - (ii) If the person does not comply with all alternative emission limits established under subsection 3.(i) above, the person shall demonstrate that the NO<sub>x</sub> emissions, averaged over all affected units, do not exceed 0.13 lb/mm btu heat input.
4. Effective May 1, 2003, no person shall cause, let, permit, suffer, or allow the emissions of NO<sub>x</sub> from an affected unit under this subsection unless:
  - (i) The NO<sub>x</sub> emissions from each affected unit(s) do not exceed the alternative emission limit established by the Director for the unit(s). Said alternative emission limits shall be determined by the Division and established in the Title V Permit for the affected unit(s). In no case shall the alternative emission limits established pursuant to this section, averaged over all affected units using the highest 30 consecutive days of actual heat input for 1999, be greater than the average allowable rate specified in subsection 4.(ii).

- (ii) If the person does not comply with all alternative emission limits established under subsection 4.(i) above, the person shall demonstrate that the NO<sub>x</sub> emissions, averaged over all affected units, do not exceed 0.20 lb/mm btu heat input.
- 5. The compliance period shall be based on a 30-day rolling average beginning May 1 and ending September 30 of each year.
  - (i) The first 30 day averaging period shall begin on May 1.
  - (ii) The last 30 day averaging period shall end on September 30.
  - (iii) Affected units under this subsection shall be all coal-fired electric utility steam generating units with a maximum heat input greater than 250 mmb tu/hr.
- 6. The requirements contained in sections 1 and 2 of this subsection shall apply to all such sources located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale. The requirements contained in section 3 of this subsection shall apply to all such sources located in the counties of Bartow, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Floyd, Forsyth, Fulton, Gwinnett, Heard, Henry, Paulding, and Rockdale. The requirements contained in section 4 of this subsection shall apply to all such sources located in the counties of Bartow, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Floyd, Forsyth, Fulton, Gwinnett, Heard, Henry, Monroe, Paulding, Putnam, and Rockdale.

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(kkk) VOC Emissions from Aerospace Manufacturing and Rework Facilities

1. No person shall cause, let, permit, suffer, or allow the emissions of VOC from the coating of aerospace vehicles or components to exceed:

(i) 2.9 pounds per gallon of coating, excluding water and exempt solvents, delivered to a coating applicator that applies primers. For general aviation rework facilities, the VOC limitation shall be 4.5 pounds per gallon of coating, excluding water and exempt solvents, delivered to a coating applicator that applies primers.

(ii) 3.5 pounds per gallon of coating, excluding water and exempt solvents, delivered to a coating applicator that applies topcoats (including self-priming topcoats). For general aviation rework facilities, the VOC limitation shall be 4.5 pounds per gallon of coating, excluding water and exempt solvents, delivered to a coating applicator that applies topcoats (including self-priming topcoats).

(iii) The VOC content limits listed in Table (kkk)-1 below expressed in pounds per gallon of coating, excluding water and exempt solvents, delivered to a coating applicator that applies specialty coatings.

**Table (kkk)-1: Specialty Coating VOC Limitations**

<b>Coating Type</b>	<b>VOC Content Limit (lb/gal)</b>
Ablative Coating	5.0
Adhesion Promoter	7.4
Adhesive Bonding Primers:	
Cured at 250° F or below	7.1
Cured above 250° F	8.6
Adhesives:	
Commercial Interior Adhesive	6.3
Cyanoacrylate Adhesive	8.5
Fuel Tank Adhesive	5.2
Nonstructural Adhesive	3.0
Rocket Motor Bonding Adhesive	7.4
Rubber-based Adhesive	7.1
Structural Autoclavable Adhesive	0.5
Structural Nonautoclavable Adhesive	7.1
Antichafe Coating	5.5
Bearing Coating	5.2
Caulking and Smoothing Compounds	7.1
Chemical Agent-Resistant Coating	4.6
Clear Coating	6.0
Commercial Exterior Aerodynamic Structure Primer	5.4
Compatible Substrate Primer	6.5
Corrosion Prevention Compound	5.9
Cryogenic Flexible Primer	5.4
Cryoprotective Coating	5.0
Dry Lubricative Material	7.3
Electric or Radiation-Effect Coating	6.7
Electrostatic Discharge and Electromagnetic Interference (EMI) Coating	6.7
Elevated Temperature Skydrol Resistant Commercial Primer	6.2
Epoxy Polyamide Topcoat	5.5
Fire-Resistant (interior) Coating	6.7
Flexible Primer	5.3
Flight-Test Coatings:	
Missile or Single Use Aircraft	3.5
All Other	7.0
Fuel-Tank Coating	6.0
High-Temperature Coating	7.1

Coating Type	VOC Content Limit (lb/gal)
Insulation Covering	6.2
Intermediate Release Coating	6.3
Lacquer	6.9
Maskants:	
Bonding Maskant	10.3
Critical Use and Line Sealer Maskant	8.5
Seal Coat Maskant	10.3
Metallized Epoxy Coating	6.2
Mold Release	6.5
Optical Anti-Reflective Coating	6.3
Part Marking Coating	7.1
Pretreatment Coating	6.5
Rain Erosion-Resistant Coating	7.1
Rocket Motor Nozzle Coating	5.5
Scale Inhibitor	7.3
Screen Print Ink	7.0
Sealants:	
Extrudable/Rollable/Brushable Sealant	2.3
Sprayable Sealant	5.0
Silicone Insulation Material	7.1
Solid Film Lubricant	7.3
Specialized Function Coating	7.4
Temporary Protective Coating	2.7
Thermal Control Coating	6.7
Wet Fastener Installation Coating	5.6
Wing Coating	7.1

(iv) 5.2 pounds per gallon of coating, excluding water and exempt solvents, delivered to a coating applicator that applies Type I chemical milling maskants.

(v) 1.3 pounds per gallon of coating, excluding water and exempt solvents, delivered to a coating applicator that applies Type II chemical milling maskants.

2. The emission limitations in this subsection shall be achieved by:

(i) The application of low solvent coating technology where each and every coating meets the specified applicable limitation expressed in pounds of VOC per gallon of coating, excluding water and exempt solvents, stated in section 1 of this subsection; or

(ii) The application of low solvent coating technology where the monthly volume-weighted average VOC content of each specified coating type meets the specified applicable limitation

expressed in pounds of VOC per gallon of coating, excluding water and exempt solvents, stated in section 1 of this subsection; averaging is not allowed between primers, topcoats (including self-priming topcoats), specialty coating types, Type I milling maskants, and Type II milling maskants or any combination of the above coating categories; or

(iii) Control equipment, including but not limited to incineration, carbon adsorption and condensation, with a capture system approved by the Director, provided that the controls system has a VOC reduction efficiency of 81 percent or greater.

3. Each owner or operator of an aerospace manufacturing and/or rework operation shall apply all non-exempt primers and topcoats utilizing one or more of the application techniques specified below:

- (i) Flow/curtain application;
- (ii) Dip coat application;
- (iii) Roll coating;
- (iv) Brush coating;
- (v) Cotton-tipped swab application;
- (vi) electrodeposition (dip) coating;
- (vii) High volume low pressure (HVLP) spraying;
- (viii) Electrostatic spray application; or
- (ix) Other coating application methods that achieve emission reductions equivalent to HVLP or electrostatic spray application methods, as determined by the Director.

4. Each owner or operator of an aerospace manufacturing and/or rework operation shall ensure that all application devices used to apply primers and topcoats (including self-priming topcoats) are operated according to company procedures, local specified operating procedures, and/or the manufacturer's specifications, whichever is most stringent, at all times. Equipment modified by the owner or operator shall maintain a transfer efficiency equivalent to HVLP and electrostatic spray application techniques.

5. Each owner or operator of an aerospace manufacturing and/or rework operation shall comply with the following housekeeping requirements for any affected cleaning operation. Aqueous cleaning solvents and hydrocarbon-based solvents which have a maximum composite vapor pressure of 7 mm Hg at 20 °C are exempt from these requirements.

- (i) Solvent-laden cloth, paper, or any other absorbent applicators used for cleaning shall be placed in bags or other closed containers upon completing their use. These bags and containers must be kept closed at all times except when depositing or removing these materials from the container. The bags and containers used must be of such a design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.
- (ii) All fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations shall be stored in closed containers.
- (iii) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh spent cleaning solvents in such a manner that spills are minimized.



6. Each owner or operator of an aerospace manufacturing and/or rework operation utilizing hand-wipe cleaning operations (excluding the cleaning of spray gun equipment performed in accordance with section 7) shall comply with one of the following:

- (i) Utilize cleaning solvent solutions that are classified as an aqueous cleaning solvent and/or a hydrocarbon-based cleaning solvent with a maximum composite vapor pressure of 7 mm Hg at 20 °C.
- (ii) Utilize cleaning solvent solutions that have a composite vapor pressure of 45 mm Hg or less at 20 °C.

7. Each owner or operator of an aerospace manufacturing and/or rework operation shall clean all spray guns used in the application of primers, topcoats (including self-priming topcoats), and specialty coatings utilizing one or more of the following techniques:

- (i) Enclosed System: Spray guns shall be cleaned in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing cleaning solvent through the gun. If leaks are found, repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.
- (ii) Nonatomized Cleaning: Spray guns shall be cleaned by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. The cleaning solvent from the spray gun shall be directed into a vat, drum, or other waste container that is closed when not in use.
- (iii) Disassembled Spray Gun Cleaning: Spray guns shall be cleaned by disassembling and cleaning the components by hand in a vat, which shall remain closed at all times except in use. Alternatively, the components shall be soaked in a vat, which shall remain closed during the soaking period and when not inserting or removing components.
- (iv) Atomizing cleaning: Spray guns shall be cleaned by forcing the cleaning solvent through the gun and directing the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

8. Each owner or operator of an aerospace manufacturing and/or rework operation that includes a flush cleaning operation shall empty the used cleaning solvents each time aerospace parts or assemblies, or components of a coating unit (with the exception of spray guns) are flush cleaned into an enclosed container or collection system that is kept closed when not in use or into a system with equivalent emission control approved by the Director. Hydrocarbon-based solvents which have a maximum composite vapor pressure of 7 mm Hg at 20 °C and aqueous and semi-aqueous materials are exempt from the requirements of this Section.

9. The following activities are not regulated by this subsection:

- (i) Research and development;
- (ii) Quality control;
- (iii) Laboratory testing activities;
- (iv) Chemical milling;
- (v) Metal finishing;

- (vi) Electrodeposition (except for the electrodeposition of paints);
- (vii) Composites processing (except for cleaning and coating of composite parts or components that become part of an aerospace vehicle or component as well as composite tooling that comes in contact with such composite parts or components prior to cure);
- (viii) Electronic parts and assemblies (except for cleaning and topcoating of completed assemblies);
- (ix) Manufacture of aircraft transparencies;
- (x) Wastewater treatment operations;
- (xi) Manufacturing and rework of parts and assemblies not critical to the vehicle's structural integrity or flight performance;
- (xii) Regulated activities associated with space vehicles designed to travel beyond the limit of the earth's atmosphere, including but not limited to satellites, space stations, and the space shuttle;
- (xiii) Utilization of primers, topcoats, specialty coatings, cleaning solvents, chemical milling maskants, and strippers containing VOC at concentrations less than 0.1 percent for carcinogens or 1.0 percent noncarcinogens;
- (xiv) Utilization of touch up, aerosol, and Department of Defense classified coatings;
- (xv) Maintenance and rework of antique aerospace vehicles and components.

10. The requirements for primers, topcoats, and chemical milling maskants specified in subsections 1(i), 1(ii), 1(iv) and 1(v) do not apply to the use of low-volume coatings in these categories for which the rolling twelve month total of each separate formulation used at a facility does not exceed 50 gallons, and the combined rolling twelve month total of all such primers, topcoats, and chemical milling maskants used does not exceed 200 gallons. The requirements for specialty coatings specified in subsection 1(iii) do not apply to the use of low-volume specialty coatings for which the rolling twelve month total of each separate specialty coating formulation used at a facility does not exceed 50 gallons, and the combined rolling twelve month total of all such specialty coating formulations used does not exceed 200 gallons. Coatings exempted under section 9 of this subsection are not included in these 50 and 200 gallon limits.

11. The following situations are exempt from the requirements of sections 3 and 4:

- (i) Any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces;
- (ii) The application of any specialty coating;
- (iii) The application of coatings that contain fillers that adversely affect atomization with HVLP spray guns and that cannot be applied by any of the application methods specified in Section 3;
- (iv) The application of coatings that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.) and that cannot be applied by any of the application methods specified in Section 3;
- (v) The use of airbrush application methods for stenciling, lettering, and other identification markings;

12. The following cleaning operations are exempt from the requirements of Section 6 of this subsection:

- (i) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;
  - (ii) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);
  - (iii) Cleaning and surface activation prior to adhesive bonding;
  - (iv) Cleaning of electronic parts and assemblies containing electronic parts;
  - (v) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid including air-to-air heat exchangers and hydraulic fluid systems;
  - (vi) Cleaning of fuel cells, fuel tanks, and confined spaces;
  - (vii) Surface cleaning of solar cells, coating optics, and thermal control surfaces;
  - (viii) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;
  - (ix) Cleaning of metallic and non-metallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture or maintenance of aerospace vehicles or components;
  - (x) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;
  - (xi) Cleaning and solvent usage associated with research and development, quality control, and laboratory testing;
  - (xii) Cleaning operations, using nonflammable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells, and tail sections; and
  - (xiii) Cleaning operations identified as essential uses under the Montreal Protocol for which the U.S. EPA has allocated essential use allowances or exemptions.
13. Each owner or operator of an aerospace manufacturing and/or rework operation shall submit a monitoring plan to the Division that specifies the applicable operating parameter value, or range of values, to ensure ongoing compliance with Subsection 2(iii) of this subsection. The monitoring device shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications.
14. Each owner or operator of an aerospace manufacturing and/or rework operation utilizing an enclosed spray gun cleaner shall visually inspect the seals and all other potential sources of leaks at least once per month. Each inspection shall occur while the spray gun is in operation.
15. Each owner or operator of an aerospace manufacturing and/or rework operation utilizing coatings specified in Section 1 shall maintain a current list of coatings that includes the specific category, VOC content as applied, and the monthly amount used for each coating.
16. Each owner or operator of an aerospace manufacturing and/or rework operation utilizing cleaning solvents shall comply with the following:
- (i) Maintain a list of materials with corresponding water contents for aqueous and semi-aqueous hand-wipe cleaning solvents.

(ii) Maintain a current list of cleaning solvents in use with their respective vapor pressures or, for blended solvents, VOC composite vapor pressures for all vapor pressure compliant hand-wipe cleaning solvents. This list shall include the monthly amount of each applicable solvent used.

(iii) Maintain a current list of exempt hand-wipe cleaning processes for all cleaning solvents with a vapor pressure greater than 45 mm Hg used in exempt hand-wipe cleaning operations. This list shall include the monthly amount of each applicable solvent used.

17. For the purpose of this subsection, the following definitions shall apply:

(i) "Ablative coating" means a coating that chars when exposed to open flame or extreme temperatures, as would occur during the failure of an engine casing or during aerodynamic heating. The ablative char surface serves as an insulative barrier, protecting adjacent components from the heat or open flame.

(ii) "Adhesion Promoter" means a very thin coating applied to a substrate to promote wetting and form a chemical bond with the subsequently applied material.

(iii) "Adhesive bonding primer" means a primer applied in a thin film to aerospace components for the purpose of corrosion inhibition and increased adhesive bond strength by attachment. There are two categories of adhesive bonding primers: primers with a design cure at 250 °F or below and primers with a design cure above 250 °F.

(iv) "Aerosol Coating" means a coating applied by means of a hand-held, pressurized container, which is non-refillable or which utilizes non-refillable propellant canisters, and which expels an adhesive or a coating in a finely divided spray when a valve on the container is depressed.

(v) "Aerospace facility" means any facility that produces, reworks, or repairs in any amount any commercial, civil, or military aerospace vehicle or component.

(vi) "Aerospace vehicle or component" means any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft.

(vii) "Antichafe coating" means a coating applied to areas of moving aerospace components that may rub during normal operations or installation.

(viii) "Antique aerospace vehicle or component" means an aircraft or component thereof that was built at least 30 years ago. An antique aerospace vehicle would not routinely be in commercial or military service in the capacity for which it was designed.

(ix) "Aqueous cleaning solvent" means a cleaning solvent in which water is the primary ingredient (greater than 80 percent by weight of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C (200 °F) (as reported by the manufacturer) and the solution must be miscible with water.

(x) "Bearing coating" means a coating applied to an antifriction bearing, a bearing housing, or the area adjacent to such a bearing in order to facilitate bearing function or to protect base material from excessive wear. A material shall not be classified as a bearing coating if it can also be classified as a dry lubricative material or a solid film lubricant.

(xi) "Bonding maskant" means a temporary coating used to protect selected areas of aerospace parts from strong acid or alkaline solutions during processing for bonding.

(xii) "Caulking and smoothing compounds" means semi-solid materials which are applied by hand application methods and are used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses. A material shall not be classified as a caulking and smoothing compound if it can be classified as a sealant.

(xiii) "Chemical agent-resistant coating (CARC)" means an exterior topcoat designed to withstand exposure to chemical warfare agents or the decontaminants used on these agents.

(xiv) "Chemical milling maskants" means a coating that is applied directly to aluminum components to protect surface areas when chemical milling the component with a Type I or Type II etchant. Type I chemical milling maskants are used with a Type I etchant and Type II chemical milling maskants are used with a Type II etchant. This definition does not include bonding maskants, critical use and line sealer maskants, and seal coat maskants. Additionally, maskants that must be used with a combination of Type I or Type II etchants and any of the above types of maskants are also not included in this definition.

(xv) "Clear coating" means a transparent coating applied over a colored opaque coating, metallic substrate, or placard to give improved gloss and protection to the color coat. In some cases, a clearcoat refers to any transparent coating without regard to substrate.

(xvi) "Commercial exterior aerodynamic structure primer" means a primer used on aerodynamic components and structures that protrude from the fuselage, such as wings and attached components, control surfaces, horizontal stabilizers, vertical fins, wing-to-body fairings, antennae, landing gear, and doors, for the purpose of extended corrosion protection and enhanced adhesion.

(xvii) "Commercial interior adhesive" means materials used in the bonding of passenger cabin interior components. These components must meet FAA fireworthiness requirements.

(xviii) "Compatible substrate primer" means either compatible epoxy primer or adhesive primer.

(xix) "Corrosion prevention compound" means a compound that provides corrosion protection by displacing water and penetrating mating surfaces, forming a protective barrier between the metal surface and moisture. Coatings containing oils or waxes are excluded from this category.

(xx) "Critical use and line sealer maskant" means a temporary coating, not covered under other maskant categories, used to protect selected area of aerospace parts from strong acid or alkaline solutions such as those used in anodizing, plating, chemical milling and processing of magnesium, titanium, or high-strength steel, high-precision aluminum chemical milling of deep cuts, and aluminum chemical milling of complex shapes. Materials used for repairs or to bridge gaps left by scrubbing operations are also included in this category.

(xxi) "Cryogenic flexible primer" means a primer designed to provide corrosion resistance, flexibility, and adhesion of subsequent coating systems when exposed to loads up to and surpassing the yield point of the substrate at cryogenic temperatures (-275 °F and below).

(xxii) "Cryoprotective coating" means a coating that insulates cryogenic or subcooled surfaces to limit propellant boil-off, maintain structural integrity of metallic structures during ascent or reentry, and prevent ice formation.

(xxiii) "Cyanoacrylate adhesive" means a fast-setting, single component adhesive that cures at room temperature. Also known as "super glue."

(xxiv) "Dry lubricative material" means a coating consisting of lauric acid, cetyl alcohol, waxes, or other noncross linked resin-bond materials that act as a dry lubricant.

(xxv) "Electric or radiation-effect coating" means a coating or coating system engineered to interact, through absorption or reflection, with specific regions of the electromagnetic energy spectrum, such as the ultraviolet, visible, infrared, or microwave regions. Uses include, but are not limited to, lighting strike protection, electromagnetic pulse (EMP) protection, and radar avoidance. Coatings that have been designated as "classified" by the Department of Defense are exempt.

(xxvi) "Electrostatic discharge and electromagnetic interference (EMI) coating" means a coating applied to space vehicles, missiles, aircraft radomes, and helicopter blades to disperse static energy or reduce electromagnetic interference.

(xxvii) "Elevated-temperature Skydrol-resistant commercial primer" means a primer applied primarily to commercial-type aircraft that must withstand immersion in phosphate-ester (PE) hydraulic fluid (Skydrol 500b or equivalent) at the elevated temperature of 150 °F for 1,000 hours.

(xxviii) "Epoxy polyamide topcoat" means a coating used where harder films are required or in some areas where engraving is accomplished in camouflage colors.

(xxix) "Fire-resistant (interior) coating" means for civilian aircraft, fire-resistant coatings are used on passenger cabin interior parts that are subject to the FAA fireworthiness requirements. For military aircraft, fire-resistant interior coatings are used on parts that are subject to the flammability requirements of MIL-STD-1630A and MIL-A-87721. For space applications, these coatings are used on parts that are subject to the flammability requirements of SE-R-0006 and SSP 30233.

(xxx) "Flexible primer" means a primer that meets flexibility requirements such as those needed for adhesive bond primer fastener heads or on surfaces expected to contain fuel. The flexible coating is required because it provides a compatible, flexible substrate over bonded sheet rubber and rubber-type coatings as well as a flexible bridge between fasteners, skin, and skin-to-skin joints on outer aircraft skins.

(xxxi) "Flight test coating" means a coating applied to aircraft other than missiles or single-use aircraft prior to flight testing to protect the aircraft from corrosion and to provide required marking during flight test evaluation.

(xxxii) "Flush cleaning" means the removal of contaminants such as dirt, grease, and coatings from an aerospace vehicle or component or coating equipment by passing solvent over, into, or through the item being cleaned. The solvent may simply be poured into the item cleaned and then drained, or be assisted by air or hydraulic pressure, or by pumping. Hand-wipe cleaning operations where wiping, scrubbing, mopping, or other hand action are used are not included in this definition.

(xxxiii) "Fuel tank adhesive" means a non-rubber based adhesive used to bond components exposed to fuel and which must be compatible with fuel tank coatings.

(xxxiv) "Fuel tank coating" means a coating applied to fuel tank components for the purpose of corrosion and/or bacterial growth inhibition and to assure sealant adhesion in extreme environmental conditions.

(xxxv) "General aviation" means that segment of civil aviation that encompasses all facets of aviation except air carriers, commuters, and military. General aviation includes charter and corporate-executive transportation, instruction, rental, aerial application, aerial observation, business, pleasure, and other special uses.

(xxxvi) "General aviation rework facility" means any aerospace facility with the majority of its revenues resulting from the reconstruction, repair, maintenance, repainting, conversion, or alteration of general aviation aerospace vehicles or components.

(xxxvii) "High temperature coating" means a coating designed to withstand temperatures of more than 350 °F.

(xxxviii) "High volume low pressure (HVLP) spray equipment" means spray equipment that is used to apply coating by means of a spray gun that operates at 10.0 psig of atomizing air pressure or less at the air cap.

(xxxix) "Hydrocarbon-based cleaning solvent" means a cleaning solvent that is composed of a mixture of photochemically reactive hydrocarbons and oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20°C. These cleaners also contain no hazardous air pollutants.

(xl) "Insulation covering" means material that is applied to foam insulation to protect the insulation from mechanical or environmental damage.

(xli) "Intermediate release coating" means a thin coating applied beneath topcoats to assist in removing the topcoats in depainting operations and generally to allow the use of less hazardous depainting methods.

(xlii) "Lacquer" means a clear or pigmented coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction. Lacquers are resolvable in their original solvent.

(xliii) "Metallized epoxy coating" means a coating that contains relatively large quantities of metallic pigmentation for appearance and/or added protection.

(xliv) "Mold release" means a coating applied to a mold surface to prevent the molded piece from sticking to the mold as it is removed.

(xlv) "Nonstructural adhesive" means an adhesive that bonds nonload bearing aerospace components in noncritical applications and is not covered in any other specialty adhesive categories.

(xlvi) "Optical antireflection coating" means a coating with a low reflectance in the infrared and visible wavelength ranges that is used for antireflection on or near optical and laser hardware.

(xlvii) "Part marking coating" means coatings or inks used to make identifying markings on material, components, and/or assemblies. These markings may be either permanent or temporary.

(xlviii) "Pretreatment coating" means an organic coating that contains at least 0.5 percent acids by weight and is applied directly to metal or composite surfaces provide surface etching, corrosion resistance, adhesion, and ease of stripping.

(xlvix) "Primer" means the first layer and any subsequent layers of identically formulated coating applied to the surface of an aerospace vehicle or component. Primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent coatings. Primers that are defined as specialty coatings are not included under this definition.

(xlvi) "Rain erosion-resistant coating" means a coating or coating system used to protect leading edges of parts such as flaps, stabilizers, radomes, engine inlet nacelles, etc. against erosion caused by rain impact during flight.

(li) "Rocket motor bonding adhesive" means an adhesive used in rocket motor bonding applications.

(lii) "Rocket motor nozzle coating" means a catalyzed epoxy coating system used in elevated temperature applications on rocket motor nozzles.

(liii) "Rubber-based adhesive" means a quick setting contact cement that provide a strong, yet flexible bond between two mating surfaces that may be of dissimilar materials.

(liv) "Scale Inhibitor" means a coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of scale.

(lv) "Screen print ink" means an ink used in screen printing processes during fabrication of decorative laminates and decals.

(lvi) "Sealant" means a material used to prevent the intrusion of water, fuel, air, or other liquids or solids from certain areas of aerospace vehicles or components.

(lvii) "Seal coat maskant" means an overcoat applied over a maskant to improve abrasion and chemical resistance during production operations.

(lviii) "Self-priming topcoat" means a topcoat that is applied directly to an uncoated aerospace vehicle or component for purposes of corrosion prevention, environmental protection, and functional fluid resistance. More than one layer of identical coating formulation may be applied to the vehicle or component.

(lix) "Semi-aqueous cleaning solvent" means a solution in which water is a primary ingredient (greater than 60 percent by weight of the solvent solution as applied must be water).

(lx) "Silicone insulation material" means an insulating material applied to exterior metal surfaces for protection from high temperatures caused by atmospheric friction or engine exhaust. These materials differ from ablative coatings in that they are not "sacrificial."

(lxi) "Solid film lubricant" means a very thin coating consisting of a binder system containing as its main pigment material one or more of the following: molybdenum, graphite, polytetrafluoroethylene (PTFE), or other solids that act as a dry lubricant between faying surfaces.

(lxii) "Specialty coating" means a coating that, even though it meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection.

(lxiii) "Specialized function coating" means a coating that fulfills extremely specific engineering requirements that are limited in application and are characterized by low volume usage. This category excludes coatings covered in other Specialty coating categories.

(lxiv) "Structural autoclavable adhesive" means an adhesive used to bond load-carrying aerospace components that is cured by heat and pressure in an autoclave.

(lxv) "Structural nonautoclavable adhesive" means an adhesive used to bond load-carrying aerospace components that is cured under ambient conditions.

(lxvi) "Temporary protective coating" means a coating applied to provide scratch or corrosion protection during manufacturing, storage, or transportation. Two types include peelable protective coatings and alkaline removable coatings. These materials are not intended to protect against strong acid or alkaline solutions.



(lxvii) "Thermal control coating" means a coating formulated with specific thermal conductive or radiative properties to permit temperature control of the substrate.

(lxviii) "Topcoat" means a coating that is applied over a primer on a aerospace vehicle or component for appearance, identification, camouflage, or protection. Topcoats that are defined as specialty coatings are not included under this definition.

(lxix) "Touch-up and repair operation" means that portion of the coating operation that is the incidental application of coating used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence or out-of-cycle coating.

(lxx) "Type I etchant" means a chemical milling etchant that contains varying amounts of dissolved sulfur and does not contain amines.

(lxxi) "Type II etchant" means a chemical milling etchant that is a strong sodium hydroxide solution containing amines.

(lxxii) "Wet fastener installation coating" means a primer or sealant applied by dipping, brushing, or daubing to fasteners that are installed before the coating is cured.

(lxxiii) "Wing coating" means a corrosion-resistant topcoat that is resilient enough to withstand the flexing of the wings.

18. The requirements of this subsection shall apply to all aerospace facilities with potential emissions of volatile organic compounds exceeding 100 tons per year, except in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale, where facilities with potential emissions of volatile organic compounds exceeding 25 tons per year are subject to this subsection.

19. Compliance Dates.

- (i) All aerospace facilities subject to this subsection and located in the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale shall be in compliance.
- (ii) All aerospace facilities subject to this subsection; located outside Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale counties; and in operation on or before October 1, 1999, shall be in compliance by January 1, 2001.
- (iii) All aerospace facilities subject to this subsection; located outside Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale counties; and which begin initial operation after October 1, 1999, shall be in compliance upon startup.

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(III) NOx Emissions from Fuel-burning Equipment

1. No person shall cause, let, suffer, permit, or allow the emission of nitrogen oxides (NO<sub>x</sub>), from any fuel-burning equipment described below that is installed or modified on or after May 1, 1999, to exceed the following:
  - (i) For fuel-burning equipment with a maximum design heat input capacity equal to or greater than 10 mmBtu/hr and less than or equal to 250 mmBtu/hr:  
  
30 ppm @ 3% O<sub>2</sub>, dry basis
2. The requirements of this subsection shall apply during the period May 1 through September 30 of each year.
3. All sources subject to this subsection shall be in compliance on or before May 1, 2000.
4. For the purpose of this subsection, "modified" shall be as defined in 40 CFR 60.14.
5. The requirements contained in this subsection shall apply to all such sources located in the counties of Banks, Barrow, Bartow, Butts, Carroll, Chattooga, Cherokee, Clarke, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Floyd, Forsyth, Fulton, Gordon, Gwinnett, Hall, Haralson, Heard, Henry, Jackson, Jasper, Jones, Lamar, Lumpkin, Madison, Meriwether, Monroe, Morgan, Newton, Oconee, Paulding, Pickens, Pike, Polk, Putnam, Rockdale, Spalding, Troup, Upson, and Walton.
6. The requirements of this subsection do not apply to fuel-burning equipment which was permitted under 391-3-1-.03(1) on or before May 1, 1999, or which was brought onto the facility on or before May 1, 1999.

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(mmm) NOx Emissions from Stationary Gas Turbines and Stationary Engines used to Generate Electricity

1. No person shall cause, let, suffer, permit, or allow the emission of nitrogen oxides (NO<sub>x</sub>), from any stationary gas turbine or any stationary engine used to generate electricity whose nameplate capacity is greater than or equal to 100 kilowatts (K We) and is less than or equal to 25 megawatts (MWe), to exceed the following:
  - (i) For stationary engines in operation before April 1, 2000:  
160 ppm @ 15% O<sub>2</sub>, dry basis
  - (ii) For stationary engines installed or modified on or after April 1, 2000:  
80 ppm @ 15% O<sub>2</sub>, dry basis
  - (iii) For stationary gas turbines in operation on or after January 1, 1999 and before October 1, 1999:  
42 ppm @ 15% O<sub>2</sub>, dry basis
  - (iv) For stationary gas turbines installed or modified on or after October 1, 1999:  
30 ppm @ 15% O<sub>2</sub>, dry basis
2. The requirements of this subsection shall apply during the period May 1 through September 30 of each year.
3. Compliance Dates.
  - (i) For stationary engines in operation before April 1, 2000, the affected unit shall comply with the applicable standard under paragraph 1 above by May 1, 2003.
  - (ii) For stationary engines installed or modified on or after April 1, 2000, the affected unit shall comply with the applicable standard under paragraph 1 upon startup of the affected unit.
  - (iii) For stationary gas turbines in operation on or after January 1, 1999 and before October 1, 1999, the affected unit shall comply with the applicable standard under paragraph 1 above by May 1, 2000.
  - (iv) For stationary gas turbines in installed or modified on or after October 1, 1999, the affected unit shall comply with the applicable standard under paragraph 1 upon startup of the affected unit.
4. For the purpose of this subsection, the following definitions apply:
  - (i) "Emergency standby stationary gas turbines and stationary engines" means any stationary gas turbine or stationary engine that operates only when electric power from the local utility is not available and which operates less than 200 hours per year.
  - (ii) "Modified" shall be as defined in 40 CFR 60.14.
  - (iii) "Stationary engine" means any spark or compression ignited internal combustion engine which is either attached to a foundation at a facility or is portable equipment located at a specific facility.

- (iv) "Stationary gas turbine" means any gas turbine that is gas and/or liquid fueled with or without power augmentation. It is either attached to a foundation at a facility or is portable equipment located at a specific facility.

5. Exemptions.

The following units are exempt from the provisions of this subsection:

- (i) Emergency standby stationary gas turbines and stationary engines.
- (ii) Stationary engines used to power portable rock crushing plants.
- (iii) Stationary engines used directly and exclusively for agricultural operation necessary for the growing of crops or the raising of fowl or animals.
- (iv) Stationary gas turbines and stationary engines not connected to an electrical generator.
- (v) Laboratory engines or gas turbines used for research and testing purposes.
- (vi) Engines or gas turbines operated by the manufacturer or distributor of such equipment for purposes of performance verification and testing at the production facility.
- (vii) Portable, temporary generators used for special events (i.e. county fair, circus) provided the event does not last more than 14 days.
- (viii) Nonroad engines as defined in 40 CFR 89.2.

6. The requirements contained in this subsection shall apply to all such sources located in the counties of Banks, Barrow, Bartow, Butts, Carroll, Chattooga, Cherokee, Clarke, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Floyd, Forsyth, Fulton, Gordon, Gwinnett, Hall, Haralson, Heard, Henry, Jackson, Jasper, Jones, Lamar, Lumpkin, Madison, Meriwether, Monroe, Morgan, Newton, Oconee, Paulding, Pickens, Pike, Polk, Putnam, Rockdale, Spalding, Troup, Upson, and Walton.

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(nnn) NO<sub>x</sub> Emissions from Large Stationary Gas Turbines.

1. No person shall cause, let, suffer, permit, or allow the emission of nitrogen oxides (NO<sub>x</sub>), from any stationary gas turbine whose nameplate capacity is greater than 25 megawatts (MWe), to exceed the following:
  - (i) For stationary gas turbines permitted under 391-3-1-.03(1) before April 1, 2000:  
30 ppm @ 15% O<sub>2</sub>, dry basis
  - (ii) For stationary gas turbines permitted under 391-3-1-.03(1) before April 1, 2000 located at a stationary source with no natural gas:  
50 ppm @ 15% O<sub>2</sub>, dry basis
  - (iii) For stationary gas turbines permitted under 391-3-1-.03(1) on or after April 1, 2000:  
6 ppm @ 15% O<sub>2</sub>, dry basis
2. The requirements of this subsection shall apply during the period May 1 through September 30 of each year.
3. Compliance Dates.
  - (i) Stationary gas turbines subject to paragraph 1.(i) or 1.(ii) above shall comply by May 1, 2003.
  - (ii) Stationary gas turbines subject to paragraph 1.(iii) above shall be in compliance upon startup.
4. The requirements contained in subparagraph 1.(iii) of this subsection shall not apply to individual units which are subject to 391-3-1-.03(8)(c)14 or 391-3-1-.03(8)(c)15.
5. By no later than May 1, 2003, the owner/operator of an affected unit may submit actual operating performance data on the affected unit, with the emission reduction technologies, as approved by the Director, in place and optimized on the affected unit, sufficient to allow the Director to determine if the NO<sub>x</sub> emission limits in subparagraphs 1.(i) or 1.(ii) are technically achievable taking into account the cost and feasibility of available control options. Based on the Director's review of the data provided, this rule may be modified.
6. The requirements contained in this subsection shall apply to all such sources located in the counties of Banks, Barrow, Bartow, Butts, Carroll, Chattooga, Cherokee, Clarke, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Floyd, Forsyth, Fulton, Gordon, Gwinnett, Hall, Haralson, Heard, Henry, Jackson, Jasper, Jones, Lamar, Lumpkin, Madison, Meriwether, Monroe, Morgan, Newton, Oconee, Paulding, Pickens, Pike, Polk, Putnam, Rockdale, Spalding, Troup, Upson, and Walton.

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Heavy-Duty Diesel Engine Requirements.

1. For the purpose of this rule, the following definitions shall apply:
  - (i) "California Air Resources Board" or "CARB" means the governmental body for the state of California that regulates air emissions;
  - (ii) "Executive Order" means a document issued by the California Air Resources Board certifying that a specified engine family or model year vehicle has met all applicable requirements of Title 13 of the California Code of Regulations (CCR) for certification and sale in California;
  - (iii) "Division" means the Environmental Protection Division of the Georgia Department of Natural Resources;
  - (iv) "Heavy-duty diesel engine" means a diesel engine that is used to propel a motor vehicle with a Gross Vehicle Weight Rating of 14,001 pounds or greater;
  - (v) "Heavy-duty motor vehicle" means a motor vehicle with a Gross Vehicle Weight Rating of 14,001 pounds or greater;
  - (vi) "Model year" means the manufacturer's annual production period which includes January 1 of a calendar year or, if the manufacturer has no annual production period, the calendar year. In the case of any vehicle manufactured in two or more stages, the time of manufacture shall be the date of completion of the chassis;
  - (vii) "Motor vehicle" means any self-propelled vehicle that is used for transporting persons or commodities on public roads;
  - (viii) "New motor vehicle" means a motor vehicle, the equitable or legal title to which has never been transferred to an ultimate purchaser;
  - (ix) "New motor vehicle engine" means a new engine in a motor vehicle;
  - (x) "Ultimate purchaser" means, with respect to any new motor vehicle or new motor vehicle engine, the first person that in good faith purchases a new motor vehicle or new motor vehicle engine for purposes other than resale;
  - (xi) "Ultra-small volume manufacturer" means any manufacturer with California sales less than or equal to 300 new passenger cars, light-duty trucks, medium-duty vehicles, heavy-duty vehicles, and heavy-duty engines per model year based on the average number of vehicles and engines sold by the manufacturer in the previous three consecutive model years;
  - (xii) "Urban bus" means a passenger-carrying vehicle powered by a heavy heavy-duty diesel engine, or of a type normally powered by a heavy heavy-duty diesel engine, with a load capacity of fifteen (15) or more passengers and intended primarily for intra-city operation, i.e., within the confines of a city or greater metropolitan area. Urban bus operation is characterized by short rides and frequent stops. To facilitate this type of operation, more than one set of quick-operating entrance and exit doors would normally be installed. Since fares are usually paid in cash or token, rather than purchased in advance in the form of tickets, urban buses would normally have equipment installed for the collection of fares. Urban buses are also typically characterized by the absence of equipment and facilities for long distance travel, e.g., restrooms, large luggage compartments, and facilities for stowing carry-on luggage; and

- (xiii) “Emergency vehicle”, “Gross Motor Vehicle Rating”, “Heavy heavy-duty diesel engine”, “Military tactical vehicle or equipment” and “Motorvehicle” shall all have the same meanings as these terms have under the heavy-duty diesel engine program adopted by the California Air Resources Board on December 8, 2000, as amended.
- 2. The Division hereby adopts and incorporates by reference the exhaust emission standards (and associated performance test procedures) for model year 2005 and subsequent model year heavy-duty diesel engines adopted by the California Air Resources Board on December 8, 2000, and any future rules governing heavy-duty diesel engines that such Board may adopt. These standards are found in section 1956.8 of Title 13 of the California Code of Regulations, which incorporates by reference the test procedures for determining compliance with the standards.
- 3. No person who is a resident of this state or who operates an established place of business within this state, shall sell, lease, rent, import or deliver in this state; lease, purchase, acquire or receive in this state; or offer for sale, lease or rental in this state (or attempt or assist in any such prohibited action) any of the following types of motor vehicles or engines that are intended primarily for use or for registration in this state, unless the manufacturer of the engine has received an Executive Order:
  - (i) A 2005 or subsequent model year heavy-duty diesel engine;
  - (ii) A new motor vehicle equipped with a 2005 or subsequent model year heavy-duty diesel engine; or
  - (iii) A motor vehicle with a new 2005 or subsequent model year heavy-duty diesel engine.
- 4. Notwithstanding subparagraph 3 above, the requirements of this rule shall not apply to:
  - (i) A model year 2005 or 2006 heavy-duty diesel engine manufactured by an ultra-small volume manufacturer or intended for use in an urban bus;
  - (ii) An engine if, following a technology review, the California Air Resources Board determines that it is inappropriate to require compliance for heavy-duty diesel engines of that particular model year and engine family;
  - (iii) A vehicle acquired by a resident of this state for the purpose of replacing a vehicle registered to such resident which was damaged or became inoperative beyond reasonable repair or was stolen while out of this state; provided that such replacement vehicle is acquired out of state at the time the previously owned vehicle was either damaged or became inoperative or was stolen;
  - (iv) A vehicle transferred by inheritance, or by a decree of divorce, dissolution, or legal separation entered by a court of competent jurisdiction;
  - (v) A motor vehicle having a certificate of conformity issued pursuant to the Clean Air Act (42 U.S.C. Section 7401 et seq.) and originally registered in another state by a resident of that state who subsequently establishes residence in this state and who, upon registration of the vehicle in this state provides satisfactory evidence to the Georgia Department of Revenue and/or Georgia Department of Motor Vehicle Safety of the previous residence and registration;
  - (vi) An emergency vehicle;
  - (vii) A military tactical vehicle or equipment; or



- (viii) Any other vehicles exempted by section 43656 of the California Health and Safety Code.
5. Any order or enforcement action taken by the California Air Resources Board to correct noncompliance with any heavy-duty diesel engine requirements adopted by such Board on December 8, 2000, shall be applicable to all such engines and motor vehicles subject to this rule that are sold, leased or rented; offered for sale, lease or rental; or registered in Georgia; except where the manufacturer demonstrates to the Division's satisfaction, within 21 days of issuance of such California Air Resources Board action, that this action is not applicable to such engines or vehicles in Georgia.
6. Any voluntary or influenced emission-related recall campaign initiated by any manufacturer pursuant to sections 2113 through 2121 of Title 13 of the California Code of Regulations shall extend to all applicable engines and motor vehicles subject to this rule that are sold, leased or rented; offered for sale, lease or rental; or registered in Georgia; except where the manufacturer demonstrates to the Division's satisfaction, within 21 days of approval of the campaign by the California Air Resources Board, that this campaign is not applicable to such engines or vehicles in Georgia.
7. A person who imports, sells, delivers, leases or rents an engine or motor vehicle that is subject to the requirements of this rule shall retain records concerning the transaction for at least 3 years following the transaction.
8. For the purposes of determining compliance with this rule, commencing with the 2005 calendar year, each person that meets the requirements of subparagraph 7 above shall submit annually to the Division, within 60 days of the end of each calendar year, a report documenting the total sales and/or leases of engines and motor vehicles for each engine family over the calendar year in Georgia.
9. Each subparagraph of this rule shall be deemed severable. If any subparagraph of this rule is held to be invalid, the remainder shall continue in full force and effect.

THIS IS THE FEDERALLY APPROVED REGULATION AS OF JULY 11, 2002.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg.	DEC 28, 2001	JUL 11, 2002	67 FR 45909

(3) SAMPLING:

- (a) Any sampling, computation, and analysis to determine the compliance with any of the emission limitations set forth herein shall be in accordance with applicable procedures and methods specified in the Georgia Department of Natural Resources **Procedures for Testing and Monitoring Sources of Air Pollutants**. When no applicable test method or procedure is published therein, the Director shall specify or approve an applicable method or procedure prior to its use.
- (b) The owner or operator of any equipment which is being sampled for the purpose of determining compliance with the Regulations shall operate such equipment at the maximum expected operating capacity during the sampling period.
- (c) The owner or operator of any source shall provide performance testing facilities as follows:
  - 1. Sampling ports adequate for test methods applicable to such source;
  - 2. Safe sampling platforms;
  - 3. Safe access to sampling platforms;
  - 4. Electric power for sampling and testing equipment.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF DECEMBER 2, 1999.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	JAN 03, 1991	OCT 13, 1992	57 FR 46780
	APR 03, 1991	OCT 13, 1992	57 FR 46780
2nd Revision:	NOV 15, 1994	FEB 02, 1996	61 FR 3817
3rd Revision	JUL 10, 1998	DEC 02, 1999	64 FR 67491

(4) AMBIENT AIR STANDARDS:

(a) No person shall cause, suffer, permit, or allow the emission from any source the quantities of compounds listed below which would cause the ambient air concentrations listed to be exceeded. This does not exempt such sources from controlling their emissions to a point equal to or lower than the levels required to comply with a specific emission standard enumerated in other sections of these Rules.

(b) Sulfur Dioxide:

1. The concentration of sulfur dioxide at ground level for any three hour period shall not exceed 1300 micrograms per cubic meter for more than one such three hour period per year.
2. The concentration of sulfur dioxide at ground level for any twenty-four hour period shall not exceed 365 micrograms per cubic meter for more than one such twenty-four hour period per year.
3. The annual arithmetic mean concentration of sulfur dioxide at ground level shall not exceed 80 micrograms per cubic meter.
4. Standard conditions for sulfur dioxide measurements shall be considered to be 25 degrees C and 760 mm.Hg. The specific standard procedure for measuring ambient air concentrations for all sulfur dioxide shall be West-Gaeke or equivalent method.

(c) Particulate Matter:

1. The concentration of  $PM_{10}$  in the ambient air for any 24-hour period shall not exceed 150 micrograms per cubic meter for more than one such 24-hour period per year. The standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms per cubic meter, as determined in accordance with Appendix K of 40 CFR Part 50 is equal to or less than 1.
2. The annual arithmetic mean concentration of  $PM_{10}$  in the ambient air shall not exceed 50 micrograms per cubic meter. The standard is attained when the expected annual arithmetic mean concentration, as determined in accordance with Appendix K of 40 CFR Part 50 is less than or equal to 50 micrograms per cubic meter.
3.  $PM_{10}$  shall be measured in the ambient air as  $PM_{10}$  (particles with an aerodynamic diameter less than or equal to a nominal ten micrometers) by a reference method based upon 40 CFR Part 50, Appendix J.

(d) Carbon Monoxide:

1. Carbon monoxide concentration, at ground level, shall not be allowed to exceed 40 milligrams per cubic meter for a one-hour average or 10 milligrams per cubic meter for an eight-hour average. Standard conditions for carbon monoxide measurements shall be considered to be 25 degrees C and 760 mm.Hg.
2. The specific standard procedure for measuring ambient air concentrations of carbon monoxide shall be the non-dispersive infrared or equivalent method.

(e) Ozone:

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1. The ambient air standard for ozone is 0.12 part per million (235 micrograms per cubic meter). The standard is attained when the expected number of days per calendar with maximum hourly average concentration above 0.12 parts per million (235 micrograms per cubic meter) is equal to or less than 1 as determined by Appendix H of 40 CFR part 50.
  2. The specific standard procedure for measuring ambient air concentrations of ozone shall be the Chemiluminescence or equivalent method.
- (f) Lead:
1. The mean concentration of lead at ground level shall not exceed 1.5 micrograms per cubic meter averaged over a calendar quarter.
  2. The specified standard procedure for measuring ambient air concentrations of lead shall be those required to comply with Federal law or other Federal authority.
- (g) Nitrogen Dioxide:
1. The annual arithmetic mean concentration of nitrogen dioxide at ground level shall not exceed 100 micrograms per cubic meter. Standard conditions for nitrogen dioxide measurements shall be considered to be 25 degrees C and 760 mm.Hg.
  2. The specified standard procedure for measuring ambient air concentrations of nitrogen dioxide shall be Chemiluminescence or equivalent method.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF AUGUST 30, 1995

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	DEC 16, 1975	AUG 20, 1976	41 FR 35184
2nd Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
3rd Revision:	APR 15, 1988	DEC 14, 1992	57 FR 58989
	JAN 03, 1991	DEC 14, 1992	57 FR 58989
	APR 03, 1991	DEC 14, 1992	57 FR 58989

(5) OPEN BURNING:

- (a) No person shall cause, suffer, allow, or permit open burning in any area of the State except as follows:
1. Reduction of leaves on the premises on which they fall by the person in control of the premises, unless prohibited by local ordinance and/or regulation;
  2. Carrying out recognized agricultural procedures necessary for production or harvesting of crops;
  3. Destruction of combustible demolition or construction materials either on site or transported to a burning facility upon approval by the Director, unless prohibited by local ordinance and/or regulation;
  4. The "prescribed burning" of any forest land by the owners or the owner's designee;
  5. The "slash burning" of any forest land by the owners or the owner's designee;
  6. For recreational purposes or cooking food for immediate human consumption;
  7. Fires set for purposes of training fire-fighting personnel when authorized by the appropriate governmental entity and the guidelines set forth by the Director are strictly observed;
  8. Disposal of tree limbs from storm damage;
  9. For weed abatement, disease, and pest prevention;
  10. Operation of devices using open flames such as tar kettles, blow torches, welding torches, portable heaters and other flame-making equipment;
  11. Setting and maintenance by contractors and tradesmen of miscellaneous small fires necessary to such activities as street-paving work installation or repair of utilities, provided that such fires are kept small in size, no smoke emissions exceed 40 percent opacity, and that local ordinances and regulations do not prohibit such actions.
  12. Open burning in other than predominantly residential areas for the purpose of land clearing or construction or right-of-way maintenance provided the following conditions are met:
    - (i) Prevailing winds at the time of the burning are away from the major portion of the area's population;
    - (ii) The location of the burning is at least 1,000 feet from any dwelling located in a predominantly residential area;
    - (iii) The amount of dirt on or in the material being burned is minimized;
    - (iv) Heavy oils, asphaltic materials, items containing natural or synthetic rubber, or any materials other than plant growth are not being burned;
    - (v) No more than one pile 60 feet by 60 feet, or equivalent, is being burned within a 9 acre area at one time.

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13. Disposal of all packaging materials previously containing explosives, in accordance with U.S. Department of Labor Safety Regulations;
14. Open burning of vegetative material for the purpose of land clearing using an air curtain destructor provided the following conditions are met:
  - (i) Authorization for such open burning is received from the fire department and the Georgia Forestry Office, if required, having local jurisdiction over the open burning location prior to initiation of any open burning at such location;
  - (ii) The location of the air curtain destructor is at least 300 feet from any occupied structure or public road. Air curtain destructors used solely for utility line clearing or road clearing may be located at a lesser distance upon approval by the Division;
  - (iii) No more than one air curtain destructor is operated within a ten ( 10) acre area at one time or there must be at least 1000 feet between any two air curtain destructors;
  - (iv) Only wood waste consisting of trees, logs, large brush and stumps which are relatively free of soil are burned in the air curtain destructor;
  - (v) Tires or other rubber products, plastics, heavy oils or asphaltic-based or impregnated materials are not used to start or maintain the operation of the air curtain destructor;
  - (vi) The air curtain destructor is constructed, installed and operated in a manner consistent with good air pollution control practice for minimizing emissions of fly ash and smoke;
  - (vii) The cleaning out of the air curtain destructor pit is performed in a manner to prevent fugitive dust.

(b) Specific County Restrictions.

1. In the counties of Cherokee Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale, the only legal exceptions to the general prohibition against open burning during the months of May, June, July, August and September shall be exceptions numbers 2, 6, 7, 10, 11, and 13 under subsection (a) above provided, however, that such burning, whenever feasible, be conducted between 10:00 a.m. and one hour before sunset.
2. Beginning in calendar year 2001, in the counties of Bartow, Carroll, Hall, Newton, Spalding and Walton, the only legal exceptions to the general prohibition against open burning during the months of May, June, July, August and September shall be exceptions numbers 2, 6, 7, 10, 11, and 13 under subsection (a) above provided, however, that such burning, whenever feasible, be conducted between 10:00 a.m. and one hour before sunset.
3. Beginning in calendar year 2001, in the counties of Banks, Barrow, Butts, Chattooga, Clarke, Dawson, Floyd, Gordon, Haralson, Heard, Jackson, Jasper, Jones, Lamar, Lumpkin, Madison, Meriwether, Monroe, Morgan, Oconee, Pickens, Pike, Polk, Putnam, Troup and Upson, the only legal exceptions to the general prohibition against open burning during the months of May, June, July, August and September shall be exceptions numbers 2, 4, 6, 7, 10, 11, and 13 under subsection (a) above provided, however, that such burning, whenever feasible, be conducted between 10:00 a.m. and one hour before sunset.

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4. Except as noted in subsections 1, 2 and 3 above, in the counties whose total population, as listed in the latest census, exceeds 65,000, the only legal exceptions to the general prohibition against open burning shall be exceptions numbers 1, 2, 4, 5, 6, 7, 10, 11, 13, and 14 under subsection (a) above, provided, however, that such burning, whenever feasible, be conducted between 10:00 a.m. and one hour before sunset and does not cause air pollution in quantities or characteristics or of a duration which is injurious or which unreasonably interferes with the enjoyment of life or use of property in such area of the state as is affected thereby. If it can be demonstrated that adequate disposal facilities for the particular combustible materials involved are not reasonably available, the other items under subsection (a) may also be allowed upon approval by the Division.
- (c) A written notification to a person of a violation at one site shall be considered adequate notice of the rules and regulations and subsequently observed violations by the same person at the same or different site will result in immediately appropriate legal action by the Director.
- (d) Except for a reasonable period to get a fire started, no smoke the opacity of which is equal to or greater than 40 percent shall be emitted from any source of open burning listed in subsections (a) and (b) above.
- (e) During an air pollution episode declared by the proper authorities, no open burning of any kind shall be permitted unless open burning is required in the performance of an official duty of any public office, or a fire is necessary to thwart or prevent a hazard which cannot be properly managed by any other means, or is necessary for the protection of public health.
- (f) Definitions.
  1. "Prescribed burning" is a fire set under controlled conditions to burn forest understory and used as a forest management practice to establish favorable seedbeds, remove competing underbrush, accelerate nutrient cycling, control tree pests, enhance wildlife habitat, and contribute to ecological benefits.
  2. "Slash burning" is a fire set to remove trunks, stumps, branches, residue, and other wastes left on land after the removal of timber.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF JULY 10, 2001:

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 27, 1972	MAY 31, 1972	37 FR 10842
1st Revision:	DEC 16, 1975	AUG 20, 1976	41 FR 35184
2nd Revision:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
3rd Revision:	MAY 22, 1985	AUG 09, 1988	53 FR 29890
4 <sup>th</sup> Revision	JUN 17, 1996	APR 26, 1999	64 FR 20186
5th Revision	JUL 31, 2000	JUL 10, 2001	66 FR 35906

(6) SOURCE MONITORING:

(a) Specific monitoring and reporting requirements for particular sources:

1. Sources, and owners and operators of sources, subject to any New Source Performance Standard of or pursuant to 42 U.S.C. 7411, as amended, shall meet the monitoring and related requirements specified in the applicable New Source Performance Standard.
2. Existing sources, as herein designated, shall provide for the continuous monitoring of emissions as prescribed below:
  - (i) Fossil Fuel-fired Steam Generators. The owner or operator of any fossil fuel-fired steam generator, except as provided for in subparagraph (iii) of this paragraph, with an annual average capacity factor of greater than 30 percent, as reported to the Federal Power Commission for calendar year 1974, or as otherwise demonstrated to the Director by the owner or operator, shall install, calibrate, operate, and maintain all monitoring equipment necessary for the continuous monitoring of the following:
    - (I) Opacity, if such steam generator has a heat input greater than 250 million BTU's per hour, except where:
      - I. Gaseous fuel is the only fuel burned; or
      - II. Oil or mixture of gas and oil are the only fuels burned and the source is able to comply with the applicable particulate matter and opacity regulations without utilization of particulate matter collection equipment, and the source has never been found, through any administrative or judicial proceedings, to be in violation of any visible emission standard;
    - (II) Sulfur dioxide, if such steam generator has a heat input greater than 250 million BTU's per hour and has installed sulfur dioxide emission control equipment;
    - (III) The percent oxygen, or carbon dioxide, in the flue gas as necessary to accurately convert sulfur dioxide continuous emission monitoring data to units (pounds per hour) of the emission standard.
  - (ii) Sulfuric Acid Plants:
    - (I) The owner or operator of any sulfuric acid plant of greater than 300 tons per day production capacity, the production being expressed as 100 percent acid, shall, except as provided for in subparagraph (iv) of this paragraph, install, calibrate, maintain, and operate a continuous monitoring system for the measurement of sulfur dioxide for each sulfuric acid production facility within such plant.
  - (iii) Wood Waste Fired Combination Boilers:
    - (I) The owner or operator of any boiler which fires wood waste or wood waste in combination with fossil fuel(s) with a total heat input equal to or greater than 100 million BTU's per hour shall, except as



provided for in paragraph (iv) of this subsection, install, calibrate, operate and maintain a continuous monitoring system for the measurement of opacity;

- (II) Boilers subject to this subparagraph (iii) shall comply with the opacity monitoring requirements as specified for fossil fuel fired steam generators. In any rule or subdivision thereof dealing with opacity monitoring requirements for fossil fuel- fired steam generators, where reference is made to "Fossil Fuel Fired Steam Generators" the term "Wood Waste Combination Boilers" should be inserted for the purpose of this subparagraph.
- (iv) Exemptions. A facility is exempt from the requirements otherwise imposed by this paragraph (a)(iv) if:
  - (I) It is subject to a New Source Performance Standard promulgated in 40 CFR, Part 60, pursuant to Section III of the Federal Act; or
  - (II) It is not subject to an applicable emission standard, or;
  - (III) The source is scheduled for retirement by October 6, 1980, provided that the source will cease operation prior to such date and adequate provisions are made for monitoring if retirement does not occur as scheduled.
- (v) Monitoring Equipment:
  - (I) The monitoring equipment required pursuant to the previous subparagraphs (I) through (iv) shall be demonstrated by the owners or operators of such monitoring equipment to meet the performance specifications specified in the Georgia Department of Natural Resources **Procedures for Testing and Monitoring Sources of Air Pollutants**.
  - (II) Any source which has purchased an emission monitoring system(s) prior to September 11, 1974, is exempt from meeting the applicable test procedures prescribed in Appendix B of Part 60, as amended, for a period not to exceed five years from the effective date of this paragraph. Thereafter, the requirements of (v)(I) above apply.
  - (III) For sulfur dioxide monitoring systems installed on fossil fuel-fired steam generators or sulfuric acid plants, pursuant to subparagraphs 2.(I) and 2.(ii), respectively, the pollutant gas used to prepare calibration gas mixture shall be sulfur dioxide (SO<sub>2</sub>). Span and zero gases should be traceable to National Bureau of Standards and analyses of such gases shall be performed at times by methods prescribed by the Director.
  - (IV) Cycling times shall include the total time a monitoring system requires to sample, analyze, and record an emission measurement.
    - I. Continuous monitoring systems for measuring opacity shall complete a minimum of one cycle of operation (sampling,

- analyzing, and data recording) for each successive ten second period;
  - II. Continuous monitoring systems for measuring carbon dioxide, oxygen, or sulfur dioxide shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
  - (V) The owner or operator of any continuous monitoring system required pursuant to this paragraph shall:
    - I. Record the zero and span drift in accordance with the method prescribed by the manufacturer of such instruments;
    - II. Subject the instruments to the manufacturer's recommended zero and span check at least once daily unless the manufacturer has recommended adjustments at shorter intervals, in such cases such recommendations shall be followed;
    - III. Adjust the zero and span whenever the 24-hour zero drift or 24-hour calibration drift limits of the applicable performance specification in Appendix B of 40 CFR, Part 60, as amended, are exceeded, and;
    - IV. Adjust continuous monitoring systems purchased or installed prior to September 11, 1974, whenever the 24-hour zero drift or 24-hour calibration drift exceed 10 percent of the emission standard.
  - (VI) Instrument span shall be approximately 200 percent of the expected instrument data display output corresponding to the emission standard for the source.
  - (VII) The owner or operator of a source subject to this rule or regulation shall install the required continuous monitoring systems or monitoring devices such that representative measurements of emissions or process parameters (i.e. oxygen or carbon dioxide) from the affected facility are obtained.
  - (VIII) When the emissions from two or more affected facilities of similar design and operating characteristics are combined before being released to the atmosphere, the owner or operator of a source subject to this paragraph (a)2. may install monitoring systems on the combined sessions. When the affected facilities are not of similar design and operating characteristics, or when the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator should establish alternative procedures to implement the intent of this requirement subject to approval by the Director.
- (vi) Data Reporting:
- (I) The owner or operator of a facility subject to the requirements of this paragraph 2. shall submit a written report for each calendar quarter and, if excess emissions have occurred,

the report shall state the nature and cause of the excess emissions, if known. The averaging period used for data reporting shall correspond to the averaging period specified in the emission test method used to determine compliance with an emission standard for the pollutant/source category in question. The required report shall include, as a minimum, the data specified in this subsection.

- I. For opacity measurements, the summary shall consist of the magnitude in actual percent opacity of six minute average of opacity which is greater than the opacity standard applicable to the source. If more than one opacity standard applies, excess emissions data must be submitted in relation to all such standards.
  - II. For gaseous measurements, the summary shall consist of emission averages in the units of the applicable standard, for each averaging period during which the applicable standard was exceeded.
  - III. The data and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments shall be reported. The Director may require proof of continuous monitoring system performance whenever system repairs or adjustments have been made.
  - IV. When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be included in the report.
  - V. The owners or operators of sources or facilities subject to this paragraph (a)2. shall maintain a file of all information reported in the quarterly summaries, and all other data collected either by the continuous monitoring system or as necessary to convert monitoring data to the units of the applicable standard for a minimum of two years from the date of collection of such data or submission of two summaries.
- (vii) Data Conversion. The owner or operator of a source subject to this paragraph (a)2. shall use the following procedures for converting monitoring data to units of the applicable standard:
- (I) For fossil fuel-fired steam generators, the procedures of Section 2.1 of the Georgia Department of Natural Resources **Procedures for Testing and Monitoring Sources of Air Pollutants** shall be used to convert gaseous emissions monitoring data in ppm to pounds/million BTU where necessary.
  - (II) For sulfuric acid plants the owner or operator shall:
    - I. Establish a conversion factor three times daily according to the procedures in Section 2.5 of the Georgia Department of Natural Resources **Procedures for Testing and Monitoring Sources of Air Pollutants**.
    - II. Multiply the conversion factor by the average sulfur dioxide concentration in the flue gases to obtain average sulfur dioxide emissions in lb/short ton, and;
    - III. Report the average sulfur dioxide emission for each averaging period in excess of the applicable emission standard in the quarterly summary.
  - (III) The owner or operator of a source subject to this regulation may employ data reporting or reduction procedures varying from those specified in this subparagraph(a)2.(vii) if

such owner or operator shows to the satisfaction of the Director that such procedures are at least as the procedures identified in this subparagraph. Such procedures may include, but are not limited to the following:

- I. Alternative procedures for computing emission averages that do not require integration of data (e.g., some facilities may demonstrate that the variability of their emissions is sufficiently small to allow accurate reduction of data based upon computing averages from equally spaced data points over the averaging period);
  - II. Alternative methods of converting pollutant concentration measurements to the units of the emission standards.
- (viii) In cases where the owner or operator of a source subject to this paragraph wishes to utilize different, but equivalent, procedures for continuous monitoring systems and/or alternative monitoring and data reporting procedures or other alternative equivalents to comply with the intent of this paragraph then:
- (I) The owner or operator must submit:
    - I. A detailed summary of the limitations prohibiting the installation of a continuous monitor; and;
    - II. Alternative and/or equivalent emission monitoring and reporting requirements (e.g., periodic manual stack tests) to satisfy the intent of this paragraph.
  - (II) The use of any alternative or equivalent method for compliance with any requirement of this paragraph .02(6)(a)2. shall be subject to approval of the Director.
- (ix) Monitor Malfunction:
- (I) The requirements of this paragraph shall not apply during any period of monitoring system malfunction, provided that the source owner or operator shows, to the satisfaction of the Director that the malfunction was unavoidable and is being or was repaired as expeditiously as practicable.
- (x) Implementation Period:
- (I) The owner or operator of any source subject to this regulation:
    - I. Shall complete the installation and performance tests of the equipment required by this paragraph and begin required monitoring and recording within 18 months from promulgation of this rule and regulation, but;
    - II. May request an extension of time to install any monitor required by this paragraph, provided such owner or operator demonstrates to the satisfaction of the Director that good faith efforts have been made to obtain and install such devices within such prescribed time frame.
- (xi) Kraft Pulp Mills:
- (I) On or before March 1, 1984, unless otherwise specified in an alternate compliance schedule as provided for in paragraph 391-3-1-.02(2)(a)9., the owner or operator of any kraft pulp mill subject to any limitation or requirement of, or under subsection (gg) of

section 391-3-1-.02(2) shall, except as provided in part (II) of this subparagraph, install, calibrate, operate, and maintain a system to continuously measure and record the concentration of TRS emissions on a dry basis in the gases discharged from any lime kiln, recovery furnace, digester system, or multiple-effect evaporator system.

- (II) The owner or operator of any kraft pulp mill which incinerates effluent gases emitted from any digester system or multiple-effect evaporator system subject to any limitation or requirement of, or under subsection (gg) of section 391-3-1-.02(2) shall install, calibrate, operate, and maintain a system to continuously measure and record the combustion temperature at the point of incineration.

(xii) Fuel Burning Equipment

(I) The owner or operator of any fuel burning equipment with a maximum design heat input capacity equal to or greater than 100 million Btu/hr subject to the provisions of subsection (III) of section 391-3-1.02(2) shall install, calibrate, operate, and maintain a continuous emissions monitoring system (CEMS) for the measurement of the concentration of nitrogen oxides ( $\text{NO}_x$ ) and the percent oxygen and shall record the output of the system.

(II) For any fuel burning equipment which only combusts gas residual oil with a nitrogen content less than 0.30 percent, or distillate oil or a combination of those fuels, the owner or operator may monitor equipment operating conditions to predict the concentration of nitrogen oxides, (Predictive Emissions Monitoring System) in lieu of the CEMS required in paragraph (I) provided such system meets the requirements of Section 2.119 of the **Procedures for Testing and Monitoring Sources of Air Pollutants**.

- 3. All sources, and owners and operators of sources, subject to any limitation of paragraphs (2)(t) through (2)(aa) [inclusive]; (2)(ii); (2)(jj); (2)(ll); (2)(mm); and (2)(tt) [inclusive] shall maintain, as specified by the Director, at the source, for a period of at least 2 years, records containing the following information for each production line:
  - (I) Process information, including, but not limited to, hours of operation, method of application, and drying method.
  - (ii) Coating formulation and analytical data, including, but not limited to, the name of inks or coatings, coating or ink density, VOC content (weight or volume percent), and solids content (volume percent).
  - (iii) Coating consumption data, including, but not limited to, name of ink or coating used, amount of ink or coating used, name of diluent and amount of diluent used.
  - (iv) Capture and control equipment data, including, but not limited to, the destruction and removal efficiency, emission test results, and the capture efficiency.
  - (v) Transfer Efficiency Data, including, but not limited to, baseline transfer efficiency, actual transfer efficiency, and results of efficiency test.
- 4. Emission Statements:
  - (i) Owners and operators of stationary sources of nitrogen oxides or volatile organic compounds shall provide the Director with a statement, in such form as the director may prescribe, for classes or categories of sources determined by the Director, showing the actual emissions of nitrogen oxides and volatile organic compounds from that source.

- (ii) Statements shall be submitted by March 31 of every year and shall show the actual emissions of the previous calendar year.
  - (iii) The requirements of this paragraph shall apply to all stationary sources of nitrogen oxides or volatile organic compounds which emit more than 25 tons per calendar of either pollutant and are located in Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnet, Henry, Paulding, or Rockdale counties.
- (b) General Monitoring and Reporting Requirements:
- 1. All Sources:
    - (I) Any person engaged in operations which cause emissions to be released into the atmosphere which may result in air pollution may be required to install, maintain, and use emission monitoring devices, to sample such specific emissions as prescribed by the Director; to make periodic reports on the nature and amounts of emissions and provide such other information as the Director may reasonably require; and to maintain such records as the Director may prescribe so as to determine whether emissions from such operations are in compliance with the provisions of this Act or any rules and regulations promulgated thereunder.
    - (ii) Specific types of information and/or equipment installation which may be requested may include, but are not limited to, the following items:
      - (I) Photoelectric or other type smoke detector and recorders for continuous measurement and recording of smoke density emissions;
      - (II) Sulfur contents of solid and liquid fuels, the determination of which shall be conducted in accordance with acceptable and appropriate American Society for Testing and Materials procedures;
      - (III) Heating value and ash content of solid and liquid fuels;
      - (IV) As technology permits, instrumentation for continuously monitoring particulate and gaseous emissions;
      - (V) For incinerators, burning rates and hours of operation and monthly summaries of this information;
      - (VI) Daily production and feed rates, daily hours of operation and monthly summaries of this information.
    - (iii) Records of information requested shall be submitted on forms supplied by the Director, or when forms are not supplied, in a format acceptable to and approved by the Director. The information obtained on request of the Director shall be retained for a period and shall be reported at time intervals to be specified. Records shall be kept current and be available for inspection at the discretion of the Director.
    - (iv) In the event of any malfunction or breakdown or process, fuel-burning, or emission control equipment for a period of four hours or more which results in excessive emissions for a major source, the owner or operator or such major source shall notify the Division by a written report which would describe the cause of the breakdown, the corrective actions taken, and the plans to prevent future occurrences. Unless otherwise specified in a permit or order, the report must be submitted no later than seven (7) days after the occurrence. The information submitted

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shall be adequate to allow the Director to determine whether the excessive emissions were due to a sudden and unavoidable breakdown. The reporting requirements of this subparagraph (iv) shall be in addition to any other reporting requirement under these rules (Chapter 391-3-1), and such reporting shall in no event serve to excuse, otherwise justify or in any manner affect any potential liability or enforcement action.

- (v) All data gathered in the process of enforcing this or other Air Quality Control Rule or Regulation shall be considered public information and shall be made available upon request, except such information which is required to be kept confidential by Ga. Code Ann. Section 12-9-19, as amended.
- (vi) Any continuous monitoring system or monitoring device shall be installed, operated, calibrated and maintained and information reported in accordance with the applicable procedures and performance specifications of the Georgia Department of Natural Resources **Procedures for Testing and Monitoring Sources of Air Pollutants**. Where no applicable procedure or performance specification for such installation, operation or reporting of data is published therein, the Director shall, as needed, specify or approve an applicable procedure or performance specification prior to operation of the monitoring system or monitoring device.

THIS IS THE FEDERALLY APPROVED REGULATION AS OF DECEMBER 2, 1999.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg:	JAN 17, 1979	SEP 18, 1979	44 FR 54047
1st Revision:	JAN 03, 1991	OCT 13, 1992	57 FR 46780
	APR 03, 1991	OCT 13, 1992	57 FR 46780
2nd Revision:	NOV 15, 1994	FEB 02, 1996	61 FR 3817
3rd Revision:	NOV 13, 1992	FEB 02, 1996	61 FR 3819
4th Revision	JUL 10, 1998	DEC 02, 1999	64 FR 67491
5th Revision	OCT 28, 1999	JUL 10, 2001	66 FR 35906
6th Revision	JAN 4, 2001	JUL 11, 2002	67 FR 45909

(7) PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY:

(a) General Requirement:

1. The provisions of this section (7) shall apply to any source and the owner or operator of any source subject to any requirement under 40 Code of Federal Regulations (hereinafter, CFR), Part 52.21 as amended.
2. Definitions: For the purpose of this section, 40 CFR, Part 52.21(b), as amended, is hereby incorporated by reference.

(b) Prevention of Significant Deterioration Standards:

1. Ambient air increments: 40 CFR, Part 52.21 (c), as amended, is hereby incorporated and adopted by reference.
2. Ambient air ceilings: 40 CFR, Part 52.21(d), as amended, is hereby incorporated and adopted by reference.
3. Restrictions on area classifications: 40 CFR, Part 52.21(e), as amended, is hereby incorporated and adopted by reference.
4. Stack heights: 40 CFR, Part 52.21(h), as amended, is hereby incorporated and adopted by reference.
5. Review of major stationary sources and major modifications- -source applicability and general exemptions: 40 CFR, Part 52.21(i), as amended, is hereby incorporated and adopted by reference.
6. Control technology review: 40 CFR, Part 52.21(j), as amended, is hereby incorporated and adopted by reference.
7. Source impact analysis: 40 CFR, Part 52.21(k), as amended, is hereby incorporated and adopted by reference.
8. Air quality models: 40 CFR, Part 52.21(l), as amended, is hereby incorporated and adopted by reference.
9. Air quality analysis: 40 CFR, Part 52.21(m), as amended, is hereby incorporated and adopted by reference.
10. Source information: 40 CFR, Part 52.21(n), as amended, is hereby incorporated and adopted by reference.
11. Additional impact analyses: 40 CFR, Part 52.21(o), as amended, is hereby incorporated and adopted by reference.
12. Sources impacting Federal class I areas--additional requirements: 40 CFR, Part 52.21(p), as amended, is hereby incorporated and adopted by reference.
13. Public participation: 40 CFR, Part 52.21(q), as amended, is hereby incorporated and adopted by reference.



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14. Source obligation: 40 CFR, Part 52.21(r), as amended, is hereby incorporated and adopted by reference.
15. Innovative control technology: 40 CFR, Part 52.21(v), as amended, is hereby incorporated and adopted by reference.
16. Permit rescission: 40 CFR, Part 52.21(w), as amended, is hereby incorporated and adopted by reference.

EDITORIAL NOTE: The word "Administrator" as used in regulations adopted in this section should be read as the "Director of EPD."

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	JAN 03, 1991	DEC 14, 1992	57 FR 58989
	APR 03, 1991	DEC 14, 1992	57 FR 58989
4th Revision:	JUN 24, 1994	FEB 02, 1996	61 FR 3817
5th Revision	JUL 10, 1998	DEC 02, 1999	64 FR 67491

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- (8) New Source Performance Standards (NSPS) (not Federally approved into SIP)
- (9) Emission Standards for Hazardous Air Pollutants (not Federally approved into SIP)
- (10) Chemical Accident Prevention Provisions (not Federally approved into SIP)

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(11) Compliance Assurance Monitoring

(a) General Requirements. The provisions of this section (11) shall apply to any stationary source and to the owner or operator of any stationary source subject to any requirement under 40 CFR Part 64 as amended, which is incorporated and adopted herein by reference.

(b) The word "Administrator" as used in regulations adopted in this section shall mean the Director of EPA. Authority, O.C.G.A. §12-9-1 et seq., as amended.

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THIS IS THE FEDERALLY APPROVED REGULATION AS OF DECEMBER 2, 1999.

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Original Reg:	JUL 10, 1998	DEC 02, 1999	64 FR 67491